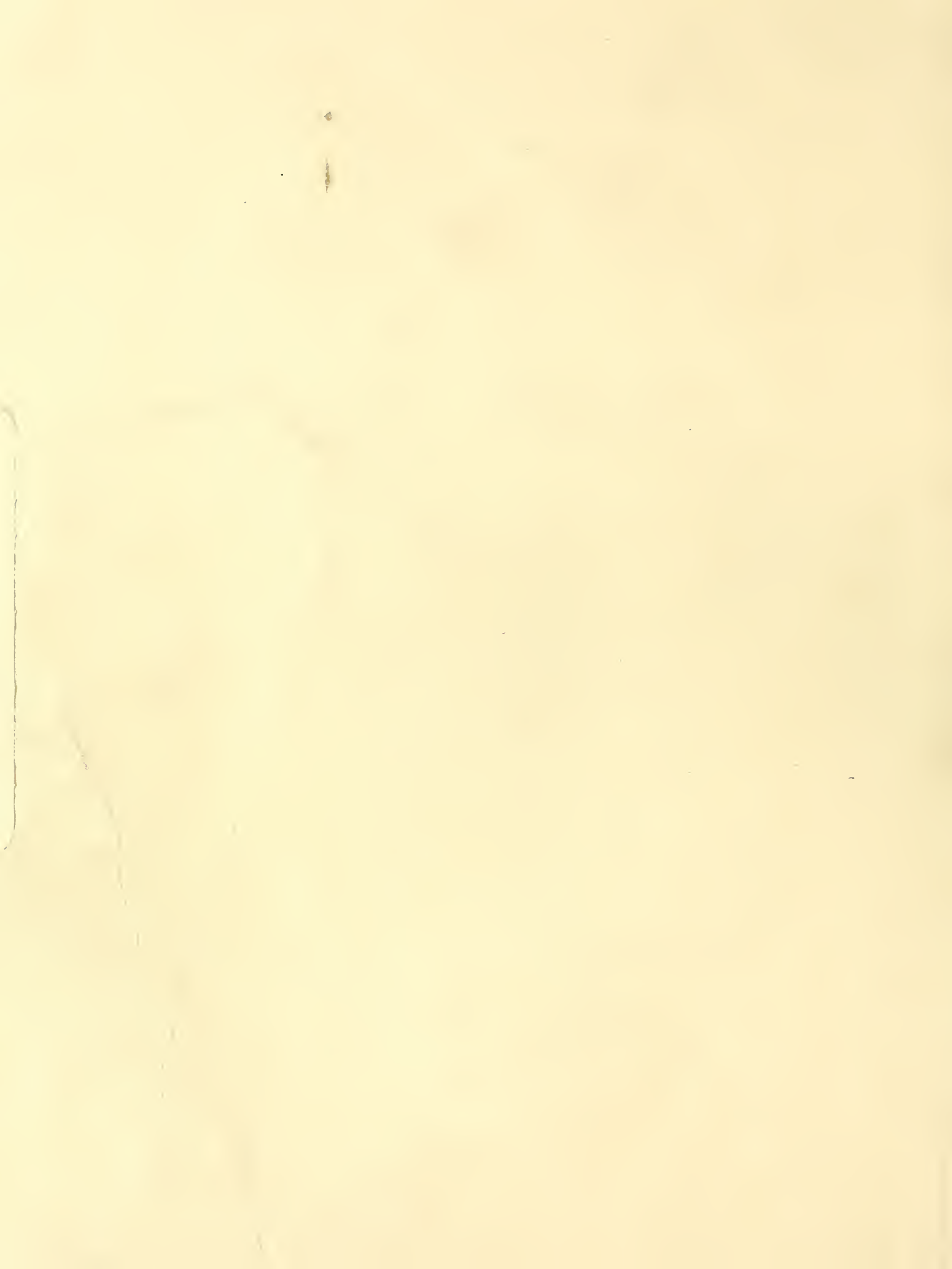


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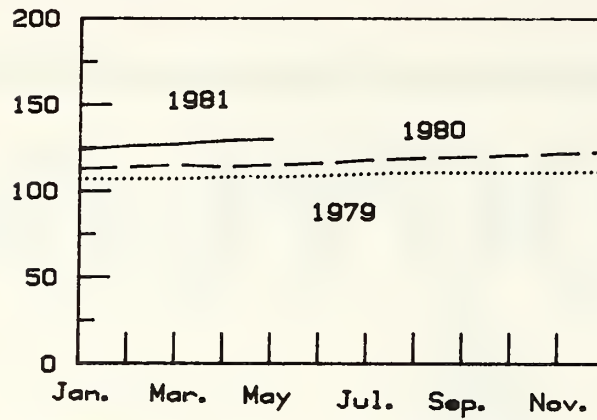
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Vegetable

OUTLOOK & SITUATION

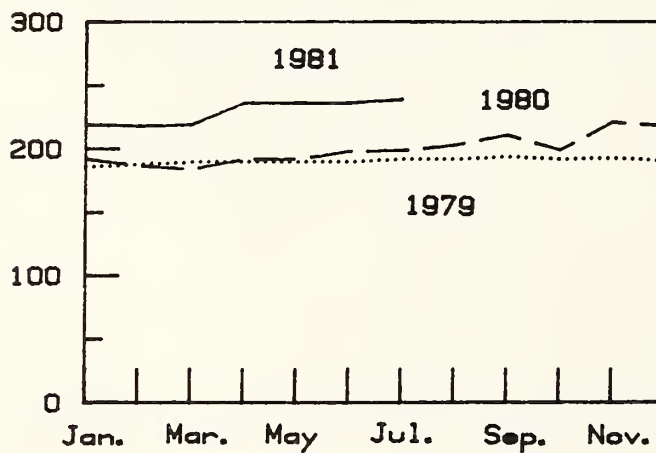
Processed Vegetables
BLS Consumer Price Index
% of 1967



USDA

Neg. ERS 252-81 (7)

Canned Vegetable-
Wholesale Price Index
% of 1967



USDA

Neg. ERS 251-81 (7)

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Summary

Fresh Vegetable Supplies are Forecast Smaller; Prices Below a Year Ago

Smaller supplies and lower prices for most fresh vegetables highlight the outlook this summer. Production of both fresh vegetables and melons will likely be down about 2 percent. Acreages of fresh market vegetables are about the same as a year ago. The Mediterranean fruit fly infestation is not expected to affect U.S. vegetable supplies and prices this summer, because the three affected counties produce less than 1

percent of California's output, and the medfly prefers fruit to vegetables.

In spring, fresh vegetable prices eased down from highs caused by Florida's January freeze and excessive rain in Mexico. The second quarter index of farm prices for fresh market vegetables was 21 percent below the first quarter but 9 percent above a year ago. Prices will likely fall seasonally with the increased summer production and average slightly lower than a year ago.

Despite last year's smaller supplies and low carryover going into 1981/82,

growers and processors contracted for 4 percent less acreage of processing vegetables this year. All major processing vegetables dropped, except sweet corn, which was up 5 percent. Decreases in other crops ranged from 25 percent for winter spinach to 2 percent for tomatoes. The combined area of major vegetables contracted for freezing is up 6 percent, while acreages of the same vegetables for canning will likely drop 7 percent. Will average yields, the total contracted tonnage will be moderately smaller than a year ago, causing somewhat lower canned supplies and slightly reduced frozen supplies. This, along with increased processing and marketing costs, will keep prices slightly above the current levels.

Per capita use of fresh market vegetables and melons increased to 129.6 pounds (58.8 kilograms) in 1980, up 2 percent from 1979. Fresh vegetable consumption rose to 111 pounds (50.4 kilograms) per person, up from 105.9 (revised) a year earlier. But this was partially offset by a dip of nearly 2 pounds in melon consumption. The changes arise primarily from the increased use of lettuce, tomatoes, and other salad vegetables, which were in good supply at attractive prices last year. Consumption of both canned and frozen vegetables declined in 1980 because of lower supplies and higher prices for most items. Consumption of canned vegetables dropped to 52.7 pounds per person (23.9 kilograms), slipping from 54.6 in 1979. Meanwhile, per capita consumption of frozen vegetables fell to 27.4 pounds (12.2 kilograms), down from 29.6 a year earlier.

Excluding potatoes, the most popular fresh vegetables, in 1980 were lettuce, at 26.8 pounds (12.2 kilograms) per person and tomatoes and onions, both 13.4 pounds (6.1 kilograms). Tomatoes and tomato products were the most important canned vegetables, with a per capita consumption of 19.2 pounds (8.7 kilograms). Frozen potato products, at 16.9 pounds (7.7 kilograms), on a product weight basis, were by far the leading frozen vegetable.

The summer potato crop for 1981 is estimated at 19.9 million cwt (901,000 metric tons), 17 percent above last year's alltime low but still the second smallest on record. The crop will push potato prices below last summer's average.

Potato prices are expected to drop further this fall. Acreage for fall potatoes is estimated at 1.04 million (422,000 hectares), 6 percent more than a year earlier, but 3 percent less than in 1979. Because the largest increase in acreage is in the Pacific Northwest, where average yields are highest, the total U.S. fall crop will probably be more than 6 percent larger than a year ago. At the end of 1981, U.S. average farm prices will be below the December 1980 record of \$6.19 per cwt.

The U.S. area of dry beans, 2.27 million acres, (918,646 hectares), is 19 percent larger than in 1980 and 59 percent above 1979. This is the largest acreage since the record 2.6 million acres planted in 1943, when World War II created greater demand. Strong export markets--particularly to Mexico--brought at this year's demand and are keeping dry bean prices high.

Vegetable Situation

VEGETABLE PRICE OUTLOOK

The index of grower prices for fresh and processed vegetables this year has averaged about 10 percent higher than a year ago. Higher prices during the first half of 1981 reflected periods of short supplies of winter and spring vegetables resulting from smaller acreages, a January freeze in Florida, and reduced imports from Mexico, which experienced a very poor winter. However, the June index of grower prices for fresh market vegetables averaged 113 (1977=100), only 2 percent higher than a year ago. Grower prices will decline seasonally during the summer as increased supplies come on the market.

Generally lower supplies also pushed retail prices higher. The June 1981, Bureau of Labor Statistics (BLS) Consumer Price Index for fresh vegetables stood at 291.1 (1967=100), 17.9 percent above a year ago. Higher marketing costs, which increased about 10 percent during the past year were partly responsible for the retail price rises. Contributing to the higher index were record high prices for fresh potatoes and onions. In June, the BLS Consumer Price Index for fresh potatoes stood at 414.3 (1977=100), 68.2 percent higher than a year ago. On the other hand, fresh tomato prices dropped in June, 11 percent below year-earlier levels.

Reflecting smaller supplies and higher processing and marketing costs, retail prices for processed fruits and vegetables in June 1981 were 13 percent higher than a year ago. Frozen vegetable prices rose 12.4 percent while prices for major canned vegetables were up an average 15.4 percent. Despite current prices for processed vegetables, the expected production increases are not likely to be large, and prices during 1981/82 will continue above the 1980/81 level.

FRESH VEGETABLES

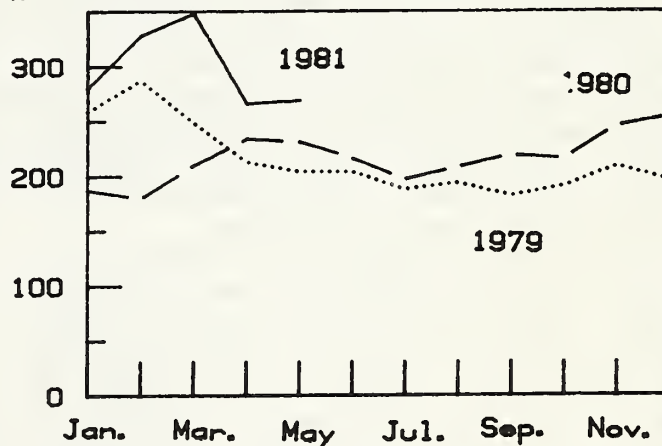
The acreage of 14 fresh market vegetables planted since April 1 is esti-

mated at 383,700 acres (155,270 hectares), virtually the same as last year. Potential output based on 3-year average yields suggests a 2-percent decrease in production. There are larger acreages of snap beans, carrots, cauliflower, sweet corn, escarole/endive, green peppers, and spinach. These increases were partially offset by smaller acreages of broccoli, celery, cucumbers, lettuce, and tomatoes. Acreages for cabbage and eggplant were the same. Total melon acreage planted since April 1 is estimated at 156,000 acres (63,120 hectares), 3 percent larger than a year earlier. Cantaloup acreage will likely to be 7 percent smaller, but this is more than offset by a 7-percent expansion of watermelon acreage.

Commercial production of fresh vegetables in California is not expected to be affected by the infestation of the Mediterranean Fruit Fly. While California accounts for 45 percent of the annual total U.S. production of fresh vegetables, commercial production in the three affected counties is less than 1 percent of the State total. In addi-

Commercial Vegetable Index Prices Received by Farmers*

% of 1967



* For Fresh Market.

USDA

Neg. ERS 2376-81 (7)

tion, while the Medfly will lay eggs on fleshy vegetables and melons, its favorite hosts are the soft tree fruits.

Production of fresh market vegetables during January-June in major producing States is estimated at 80.4 million cwt (3.65 million metric tons), compared with the 79.5 million cwt produced during the same period in 1980. Harvested acreage of these 14 crops is estimated at 421,710 acres, 2 percent less than a year ago.

First-half output of broccoli, cabbage, carrots, cauliflower, escarole/endive, lettuce, green peppers, and spinach was larger than a year earlier. Production was smaller for snap beans, celery, sweet corn, cucumbers, eggplant, and tomatoes.

Melon production during January-June 1981 is estimated at 17.9 million cwt (813,330 metric tons), 19 percent above last year. This year's January-June output was harvested from 123,900 acres, up 23 percent from a year ago. The average yield for all melons was 150 cwt compared with 145 cwt an acre last year. Watermelon and cantaloup yields were down, but honeydew yields were up 10 cwt to 170 cwt an acre.

Prospects for Major Fresh Vegetables Tomatoes

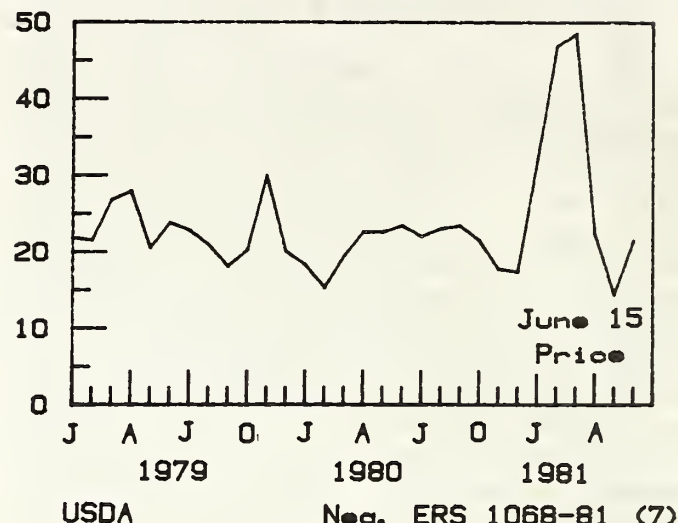
Acreage of tomatoes planted after April 1 for summer harvest is estimated at 53,200 acres (21,530 hectares), 4 percent less than a year ago. Assuming average yields, the summer tomato crop is expected to total about 9.1 million cwt, 7 percent less than in 1980.

Among the leading States, acreage will be reduced in Alabama, Arkansas, California, Michigan, New York, Pennsylvania, and Texas. Only New Jersey and Virginia are showing increases.

Total weekly unloads of tomatoes at U.S. markets through June were slightly above last year, despite higher prices during February-April. Following the Florida freeze, grower prices jumped to \$46.90 a cwt in February, \$48.50, in March, and \$22.30 in April, before declining to \$14.40 in May--32 percent below a year ago. Low prices in May re-

Tomatoes: U. S. Grower Price

\$ Per CWT.



sulted from heavy Florida shipments from the Manatee-Ruskin areas. Prices for fresh tomatoes are expected to continue slightly below 1980, despite the 4-percent reduction in acreage, because of generally good weather and competition from local noncommercial production.

Carrots

Acreage planted to carrots for harvest after July 1 is estimated at 25,700 acres (10,400 hectares), 9 percent above the planted acreage a year ago. Based on average yields for the past 3 years, production is estimated at 7.1 million cwt, up 13 percent from last year. California, the largest producer of summer carrots for fresh market, increased its acreage 10 percent to 6,900 acres. Michigan, a large producer of carrots for both fresh and processing markets, enlarged its acreage 3 percent to 7,000 acres. Washington and Wisconsin, other large producers, expanded acreage 2 and 4 percent to 4,500 and 5,000 acres, respectively.

California's carrot harvest in June was heavy in the Kern District and Salinas Valley. Some carrot area in Michigan had to be replanted because of excessive moisture. But the crop is currently progressing normally. Washington's early carrot crop is slightly behind schedule.

Table 1--Vegetables and melons for fresh market: Reported commercial acreage and projected production of principal crops, selected seasons, 1980 and indicated 1981

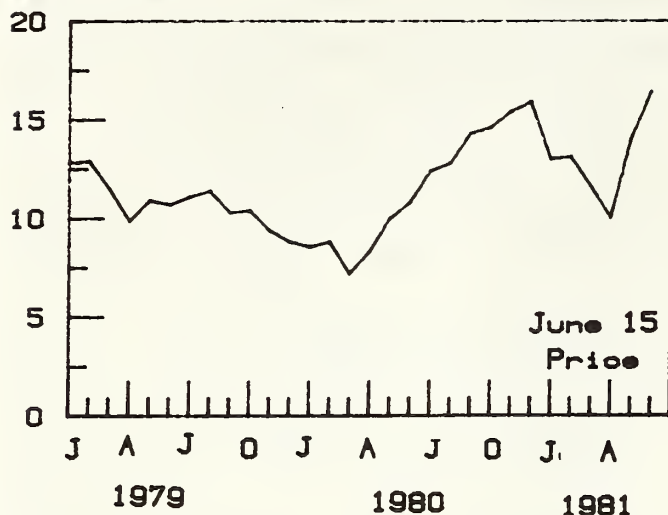
Seasonal group and crop	Planted Acres		Indicated Production ¹			
	1980 major States	1981		Major States		
		Indicated major states	Percent of 1980	1980	1981	Percent of 1980 ⁴
	1,000 acres		Percent	million cwt.		
January 1	216.1	197.7	91			
April 1	354.7	372.2	105			
July 1						
Snap beans	33.2	35.2	106	1.1	1.2	112
Broccoli ²	16.0	15.5	97	1.5	1.3	89
Cabbage	28.5	28.5	100	5.7	5.8	102
Carrots ²	23.6	25.7	109	6.3	7.1	113
Cauliflower ²	13.1	13.3	102	1.2	1.3	107
Celery ²	8.1	8.0	99	4.1	3.8	93
Sweet corn	108.6	109.0	100	7.4	7.1	96
Cucumbers	16.5	15.4	93	1.6	1.5	92
Eggplant	1.0	1.0	100	.2	.2	100
Escarole-Endive	.6	.8	133	.1	.1	100
Lettuce	52.0	51.1	98	15.1	14.4	96
Green peppers ²	24.3	24.8	102	2.0	1.9	94
Spinach	2.0	2.3	115	.2	.2	100
Tomatoes	55.5	53.2	96	9.8	9.1	93
Total 14 vegetables ³	383.0	383.7	100	56.3	55.1	98
Honeydew melons	10.9	11.3	104	2.0	2.1	105
Cantaloups	43.0	39.9	93	6.4	5.5	86
Watermelons	98.1	104.8	107	10.2	10.7	105
Total melons ³	152.0	156.0	103	18.6	18.3	98

¹These are projections based on historic relationships and are not official estimates of the Crop Reporting Board. ²Includes fresh market and processing. ³May not add to total due to rounding. ⁴Percentage figures listed are correct-Production data in this table have been rounded.

Vegetables for Fresh Market, SRS, USDA.

Carrots: U.S. Grower Price

\$ Per CWT.



USDA

Neg. ERS 1058-81 (7)

During the first week in July, cartons of 48-1 lb. film bags of carrots were priced at \$4.50 a carton, f.o.b. Kern County, compared with \$6.00 a year ago. With a larger prospective summer crop, prices during the third quarter are expected to remain below a year earlier.

Cabbage

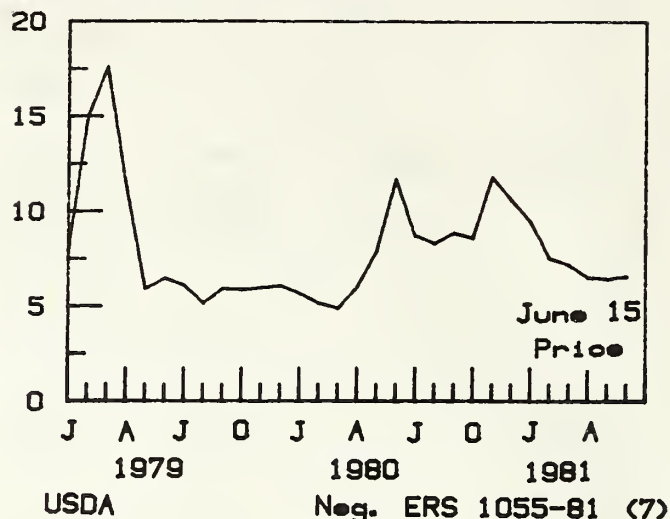
Cabbage acreage is estimated at 28,500 acres (115,530 hectares), the same as in 1980. Potential production based on average yields for the past 3 years, is forecast to be 5.8 million cwt, 2 percent larger than a year ago. In 1981, New Jersey expects to have the same acreage as a year ago--3,000 acres. North Carolina's acreage will also remain the same--1,900 acres. However, upstate New York will have 7,600 acres; Michigan, 3,400; Pennsylvania, 3,000; and Ohio, 2,300.

Grower prices during January-April were substantially higher than a year ago but in May dropped to \$6.43 a cwt, down from \$8.22 last year. During the last week of June, 1-3/4 bushel cartons of cabbage were \$2.75, f.o.b. eastern North Carolina shipping points, compared with \$7.81 a year ago. Despite a static acreage situation supplies are larger

Cabbage:

U.S. Grower Price

\$ Per CWT.



USDA

Neg. ERS 1055-81 (7)

and, prices for fresh cabbage will likely average moderately lower than a year earlier.

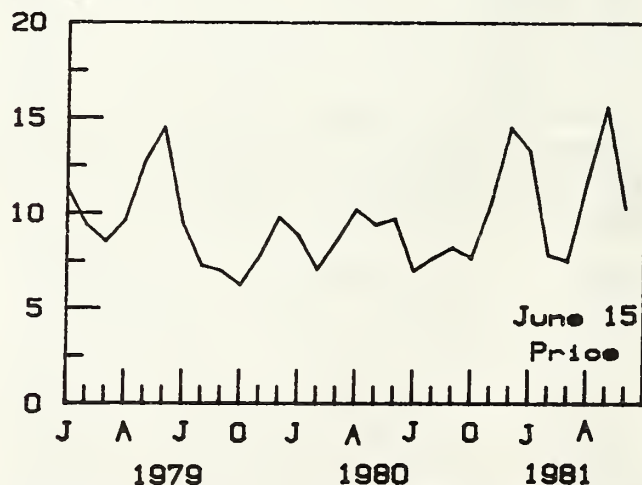
Celery

An estimated 7,950 acres (3,220 hectares) of celery were planted for harvest after July 1. This is 1 percent less than last year. California, (the

Celery:

U.S. Grower Price

\$ Per CWT.



USDA

Neg. ERS 1056-81 (7)

largest celery producer), and New York are showing acreage decreases, while Michigan is expecting a 3-percent expansion. However, some of Michigan's celery crop got off to a slow start because of a cold spring and heavy rains. Some of California's crop in the Salinas Valley was abandoned after several days of unseasonably hot weather.

Except in March 1981, when they were lower, grower prices have been moderately to substantially higher than a year ago. The slight decrease in acreage will likely keep grower prices slightly above 1980. During the week of July 4, crates of 2 to 3 dozen stalks were priced at \$7.88, f.o.b. Salinas/Watsonville, California, compared with \$4.75 a crate a year ago.

Sweet Corn

Summer sweet corn acreage is estimated at 109,000 acres, up slightly from a year ago. Of the major States, only Connecticut, Illinois, Massachusetts, and North Carolina are showing declines. Production is projected to total 7.1 million cwt, about 4 percent less than last year. In Ohio, first plantings were on schedule, but mid-June rainfall hampered planting and slowed crop progress in the northern half of the State. In Illinois, crop conditions are only fair. However, in New York, Michigan, Pennsylvania, and California, weather conditions have been generally favorable during the growing season, and good crops are expected. Harvest has begun in nearly all areas.

Prices to growers during the first 5 months of 1981 were moderately to substantially higher than a year ago, partially because of the Florida freeze, which caused sweet corn to jump to \$22.40 per cwt, in February up from \$14.80 a year earlier. In June, prices fell to \$8.08 from \$11.90 in June 1980.

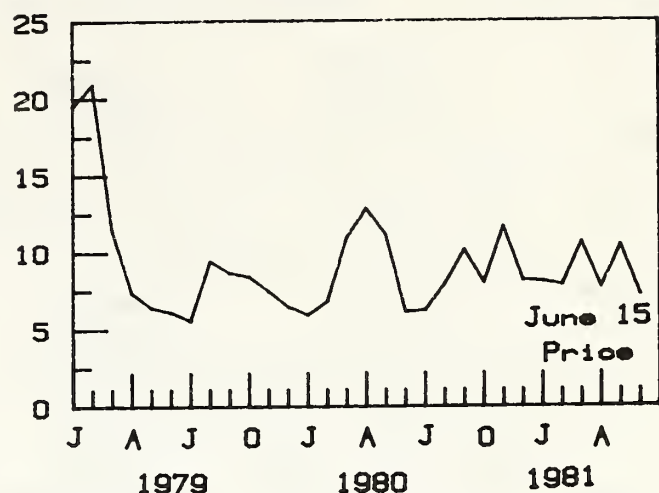
Lettuce

Acreage planted to lettuce for harvest after July 1 is placed at 51,100 acres (20,680 hectares), 2 percent below the July 1980 estimate. Assuming the average yields of the past 3 years, total

Lettuce:

U. S. Grower Price

\$ Per CWT.



USDA

Fig. ERS 1059-81 (7)

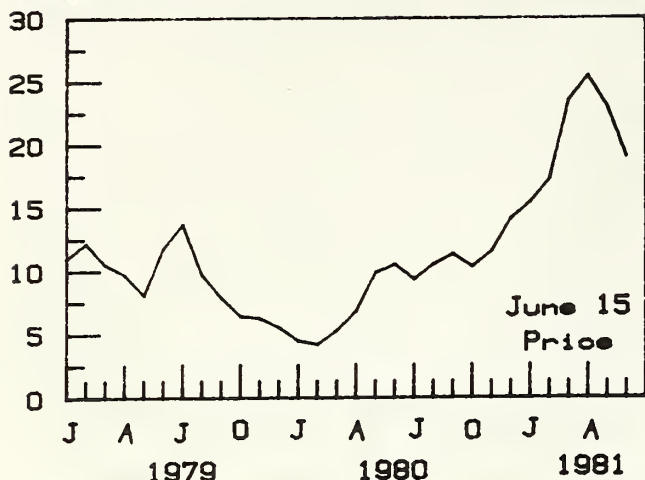
production will be about 14.5 million cwt, 4 percent less than a year ago.

California's lettuce crop planted for harvest during June-August is progressing satisfactorily. The largest volume will come from the Salinas/Watsonville area, with smaller volumes coming from the Santa Maria, Oceano, and Bay areas. Eastern lettuce will come primarily from New York and New Jersey. However, most of New Jersey's lettuce will be harvested in September and October.

Lettuce prices (f.o.b. shipping points) so far this year have been fairly steady because there were no major interruptions in supplies. Reflecting only minor interruptions, monthly average grower prices have fluctuated from \$10.60 per cwt in March to \$7.69 in April. U.S. grower prices averaged \$10.40 per cwt in May. During the first week in July, cartons of 24 heads of Iceberg lettuce were priced at \$5.13 (f.o.b. Salinas/Watsonville), compared with \$2.69 a year earlier. Any interruptions in lettuce supplies are immediately reflected in higher prices. However, it appears that increased production and marketing costs have raised lettuce prices to a new, higher plateau.

Onions: U. S. Grower Price

\$ Per CWT.



USDA

Neg. ERS 1057-81 (7)

Onions

The 1981 early onion crop in the three major States (Arizona, California, and Texas) is forecast at 5.6 million cwt (253,870 metric tons), down 5 percent a year earlier and 6 percent below 1979. Area intended for harvest, 24,800 acres (10,040 hectares), is the same as last year but 15 percent less than in 1979. The expected average yield, at 226 cwt an acre, is 11 cwt below 1980 but 22 cwt above 1979.

Acreage for harvest of late, non-storage and storage-type onions is estimated at 87,500 acres (35,410 hectares), 1 percent below 1980 and 8 percent down from 1979. Nonstorage production is estimated at 2.88 million cwt, 11 percent below 1980. Acreage for harvest of storage-type onions is placed at 76,170 acres, up 1 percent from a year ago.

Cantaloups and Honeydews

Summer cantaloup acreage is estimated at 39,900 acres (16,150 hectares), 7 percent below a year earlier. Reductions of 40 percent in Georgia and 16 percent in Texas more than offset a 59-percent rise in the San Joaquin Valley of California.

Honeydew melon acreage planted since April 1 is estimated at 11,300 acres (45,700 hectares), 4 percent than larger

July 1, 1980. The honeydew harvest was completed in Arizona during June and will peak in California in August.

Watermelons

Planted acreage of watermelons on July 1, at 104,800 acres (42,410 hectares), is 7 percent more than a year ago. F.o.b. shipping point prices for domestic watermelons in late June were averaging slightly lower than last year's high prices. With larger supplies on the market, prices are expected to remain below a year ago this summer.

PROCESSED VEGETABLES

1981/82 Prospects

Total supplies of canned vegetables in 1980/81 were approximately 5 percent smaller than a year earlier. There were smaller supplies of nearly all canned vegetables, especially canned tomatoes. None of the supplies of the leading crops was larger in 1980/81 than in the previous season.

The ERS index of wholesale prices for canned vegetables in July averaged 239.1 (1967=100), compared with 198.7 a year earlier. The index climbed steadily throughout 1980 and appeared to reach a plateau of 235 to 240 in April. Price rises for most canned vegetables reflect the end of the marketing season and continued increases in processing and marketing costs, including interest on inventories. Prospects for smaller packs of vegetables this summer also are a factor.

The supply of frozen vegetables (excluding potatoes) on January 1, 1980, set a new record of 1.9 billion pounds, reflecting the large pack in 1979. However, the supply on January 1, 1981, declined to 1.67 billion pounds, 12 percent less than a year earlier. Supplies of nearly all frozen vegetables were smaller. Movement was good this year, and on July 1 stocks of the principal frozen vegetables fell to 922 million pounds, 22 percent below a year earlier.

Despite last year's lower production and generally favorable prices, growers and processors plan to decrease the con-

Table 2-Vegetables for processing: Planted acreage,
annual 1980 and 1981 ¹

Crop	Planted acreage		1981 as percent of 1981
	Contract 1980	Contract 1981	
	---1,000 acres---		Percent
Snap beans	248.0	225.0	91
Green peas	344.5	318.8	93
Spinach (winter and spring)	21.4	17.4	81
Green lima beans	52.6	50.6	96
Beets	14.8	11.4	77
Sweet corn	403.3	423.3	105
Cucumbers for pickles	105.9	88.2	83
Tomatoes	261.6	256.0	98
Total ²	1452.1	1390.7	96
For freezing:			
Green lima beans	28.8	30.1	105
Snap beans	56.3	57.9	103
Sweet corn	115.5	128.8	112
Green peas	121.0	125.6	104
For canning:			
Green lima beans	23.7	20.5	87
Snap beans	191.6	167.1	87
Sweet corn	287.8	294.5	102
Green peas	223.5	193.2	86

¹ 1981 production for canning and freezing will be published in December annual summary. ² May not add to total due to rounding.

Data from Vegetables-Processing, SRS, USDA.

tracted acreage of major processing vegetables about 4 percent from 1980. All crops are showing reduced acreage, except sweet corn, which is up 5 percent. Declines for other crops range from 25 percent for winter spinach to 2 percent for tomatoes. The contracted tonnage of cabbage for kraut is expected to be up 10 percent from last year, and tomato tonnage will likely rise 9 percent. The combined acreage of lima and snap beans, sweet corn, peas, and spinach contracted

for freezing is projected to be up 6 percent, while the area for the same crops for canning will likely to be down 7 percent.

If yields are average, the total contracted tonnage of processing vegetables will drop about 10 percent from a year ago. This, plus a smaller carryover, indicates reduced total supplies of canned vegetables and upward pressure on prices. Lower supplies and increased processing and marketing costs will

force prices of most canned vegetables moderately above current levels.

For example, the ERS Marketing Cost Index rose 12.3 percent during the first 5 months of 1981 and in May stood at 317.1, 12 percent higher than a year earlier. Also, costs of tin cans rose 7.3 percent; glass containers climbed 13 percent; and fuel and power jumped 20.6 percent. Hourly wages for workers in the fruit and vegetable processing industries averaged \$6.44 a hour in April. In this, the third year of a new contract negotiated by California cannery workers, wages and cost of living allowances are expected to push labor costs up 9.8 percent in 1981.

Excessive moisture in some areas and below normal temperatures in others delayed plantings. Since the slow start, however, weather conditions have been favorable in the major processing areas. Processing areas in the Midwest suffered excessive rainfall and some flooding in the early spring, but weather has been favorable since then. Vegetable crops in the Pacific Northwest have made good progress under warm, sunny conditions.

Prospects for Leading Vegetables

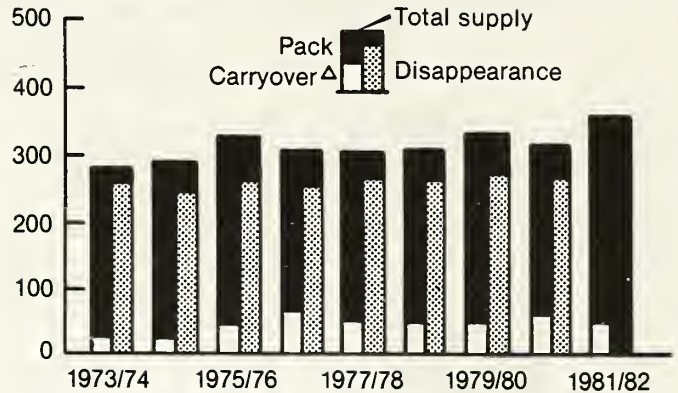
Snap Beans

This year's acreage of snap beans contracted for processing, 224,980 acres (91,000 hectares), is down 9 percent from 1980 contracted acreage. Acreage destined for canning is down 13 percent. With average yields, the 1981/82 crop for processing will be down substantially.

Because of a large carryover from 1979/80 and a sizeable, but not burdensome pack last season, total supplies of canned green beans were above average last winter, and prices were low. With low prices and aggressive promotion, canned green beans were consumed at an above-average pace. However, despite reduced prices and good movement, carryover stocks at the beginning of the new pack year (July 1) likely totaled slightly more than 10 million cases (24/303's)--still a much larger carryover than the industry would like. With a smaller pack this year, total supplies

Total Supply and Disappearance of Seven Canned Vegetables*

Million cases 24/303's



*Lima beans, snap beans, beets, sauerkraut, sweet corn, green peas and tomato products. ΔCarryover excludes distributor's stocks.

USDA

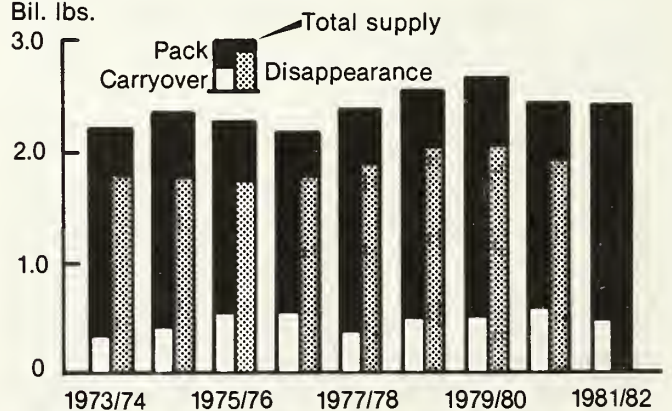
Neg. ERS 814-81 (7)

of canned green beans will likely be the smallest since the early 1970's. Cannery will raise prices on new-pack green beans this fall.

On July 1, stocks of frozen green beans were 16 percent smaller than a year ago; regular cuts dropped 9 percent, and French-style down 28 percent. Freezers contracted for 3 percent more acreage this season. With average yields the pack of frozen green beans will likely be down about 4 percent. Two freezers announced higher prices effective July 20; others are expected to follow suit in August. Prices for cartons of 24/9-oz. packages will be

Total Supply and Disappearance of Seven Frozen Vegetables*

Bil. lbs.



*Lima beans, snap beans, sweet corn, green peas, spinach, broccoli and carrots.

USDA

Neg. ERS 813-81 (7)

raised about 40 cents a case; institutional packs will rise about 4 cents a pound.

Green Peas

The carryover of green peas was even larger in 1981 than a year earlier, reflecting large packs of the past 2 years and only average movement. In response, processors contracted for an estimated 451,360 tons (409,000 metric tons) this year, 6 percent less than in 1980. The 1981 contracted tonnage is expected to be harvested from 302,080 acres, also 6 percent less than a year ago. Yield per acre is expected to average 1.49 tons, the same as last year. Tonnage in Wisconsin, the largest producing State, is expected to be down 26 percent. With these decreases, total supplies of canned green peas will decline to slightly more than 30 million cases (24/303's)--a level more compatible with annual consumption. Prices will remain firm throughout the 1981/82 marketing year.

Canning is underway in most areas of the United States. Wisconsin's early peas developed well, but later plantings lacked moisture for good germination. The California green pea harvest has been completed, and yields were good. The harvest in both Oregon and Washington was progressing normally in early July.

The acreage of peas contracted for freezing rose 4 percent from the 120,950 acres in 1980. On July 1, stocks of 132.1 million pounds of frozen green peas were 26 percent less than a year ago. The 1981 pack is forecast to be slightly more than 350 million pounds, resulting in supplies that are about 4 percent less than in 1980/81 but still comfortably above annual requirements. Reflecting somewhat smaller supplies and higher prices, disappearance of frozen green peas declined to about 350 million pounds in 1980/81 and is expected to remain at that level during the next marketing year. Prices for frozen green peas were raised this summer and will remain moderately above a year earlier throughout this marketing season.

Sweet Corn

Growers and canners contracted for 2 percent more acreage of sweet corn for canning this year, reflecting the small carryover from the 1980 pack. The 1980/81 pack was smaller than expected, and prices for Midwestern golden corn were above a year earlier throughout the marketing season. Despite higher prices, disappearance of canned corn has been up substantially. Carryover on July 1 is projected to be the lowest in years. With average yields, this year's pack will be approximately 55 to 60 million cases (24/303's), but total supplies will still be smaller than during the past 3 years. Bad weather this spring interrupted planting in some of the major processing States, and yields may be less than average. As a result, prices for canned corn will remain firm throughout 1981/82.

Acreage of sweet corn planted for freezing is expected to be up 12 percent, reflecting short supplies of frozen corn. On July 1, stocks of cut corn were down 36 percent, and corn-on-the-cob stocks dropped 55 percent. If average yields are obtained, the pack should be 15 percent larger, and stocks will be 700 to 750 million pounds. Consumption of frozen corn continues to rise each year because of the increased popularity of frozen corn-on-the-cob. Because supplies will be tight throughout 1981/82, major freezers have raised prices.

Tomatoes

An estimated 256,310 acres of tomatoes are under contract by canners in 1981, a 2-percent decrease from a year ago. Acreage in California--at 209,000 acres--is down 1 percent and accounts for 82 percent of the total. For all producing areas tomato tonnage contracted for 1981, at 6.67 million tons, is a 9-percent rise over the 1980 actual production of contracted acres. California processors report tonnage contracted or to be contracted at 5.8 million tons. Whether this tonnage is realized will depend on plant development and weather during bloom, set, and harvest. Eighty-six percent of the

California output was contracted on a tonnage basis. Contracts for nearly all of the crop had been written by June 1.

This year, because of a small carry-over of canned tomatoes, growers were in a better bargaining position; processors were anxious to rebuild depleted stocks. By mid-May, two of the largest tomato processors had reached agreements in negotiations with the California Tomato Growers Association to pay a base price of \$53 a ton for processing tomatoes. Each agreement offered discounts of \$3 a ton for payments by specific dates. A year ago, growers received an average of \$47.50 a ton, but some did well because yields were high and the growing season was extended into October.

The National Food Processors Association estimated supplies of canned tomatoes on April 1 at 19.4 million cases (24/303 equivalent), 10 percent below a year earlier. By July 1, stocks were projected to be the lowest in years. If the contracted tonnage is realized, the pack will be one of the largest in the past few years, but total supplies for next marketing season will be the smallest since 1976.

In California, weather for planting was excellent and fields have made good progress, with very good stands and sets. Harvest started in the desert about June 3 and began in the southern San Joaquin Valley in early July. The Sacramento Valley harvest is scheduled for late July, followed by the central coast in August. Ohio's processing tomato crop has been under stress since mid-June because of excessive rainfall and flooding. Damage in the northwestern part of the State is estimated at 25 percent of the crop.

Because of smaller supplies and good sales last year, prices for canned tomatoes and tomato products were firm during most of 1980/81. Imports of canned tomatoes during January 1-June 1, at 27.7 million pounds, were nearly double the imports of a year earlier. Meanwhile, exports of canned tomatoes were down 13 percent.

Prices for canned tomatoes and tomato products are firm at list prices. In view of the smaller total supplies in prospect this fall, prices will be rise after the new packing season gets under-

way. The amount of the rise will depend on actual production from the contracted acreage.

Asparagus

On July 1, stocks of frozen asparagus totaled 11.3 million pounds, down 30 percent from a year ago. In Michigan, both freezers and canners expect to make smaller packs. Deliveries to Michigan processors through June 6 equaled 8.5 million pounds, compared with 13.2 million a year ago and total deliveries of 21.6 million. Fresh market sales of asparagus have been very good this year in spite of the slow production start. To increase the flow of asparagus to processing, freezers and canners raised the price to 60 cents a pound, based upon grade, up from the 55 cents negotiated earlier.

Despite relatively small stocks of both canned and frozen asparagus, prices are not likely to rise appreciably. Asparagus is currently priced as a gourmet item and will probably remain in this category until growing, harvesting, and processing costs are reduced.

Other Processing Vegetables

The contracted tonnage of cabbage for kraut, 219,880 tons, is up 10 percent from the 1980 contracted production. This may result in an 8 to 10 percent increase in the kraut pack this year, raising total supplies to about 15 million cases (24/303 equivalent). Prices will be about the same as last year or perhaps a trifle higher, reflecting higher processing and marketing costs.

Contracted acreage for pickling cucumbers planted for harvest in 1981 is expected to be 88,200 acres, down 17 percent from 1980. With a smaller carry-over this summer and a moderately smaller supply of raw product, pickle supplies will be down substantially this fall and winter, and prices will be higher.

Drastic cuts in the contracted acreage of lima beans for processing in 1980 caused smaller packs of both canned and frozen lima beans and reduced carryovers for 1981/82. This year, processors and

growers have contracted for 4 percent more acreage for freezing but have again reduced acreage for canning by 13 percent. Total supplies of both canned and frozen lima beans will be substantially smaller in 1981/82 than last year, and prices will remain firm this fall and winter. Prices for baby lima beans will probably rise after the new pack has been determined.

Because of a large carryover of canned beets, contracted tonnage for 1981/82 was cut another 23 percent after a 22-percent reduction in 1980/81. This will lead to a smaller pack this year and canned beet supplies during next season will be the smallest in years. Prices will probably rise from current low levels.

The California pack of frozen broccoli will likely to be up this year. Production of broccoli during January-June totaled 3.6 million cwt, up 10 percent from a year earlier. Stocks of frozen broccoli were down 16 percent on July 1, but with only a moderately larger pack in prospect and higher costs of processing, prices are expected to remain above a year earlier.

VEGETABLE CONSUMPTION

Fresh Vegetable and Melon Use Up in 1980

Per capita use of fresh vegetables and melons increased in 1980 to 129.6 pounds, up from 126.6 (revised) a year earlier. Fresh vegetable consumption rose to 111 pounds for person--up from 105.9 in 1979--but melon consumption dropped to 18.6 pounds, down from 20.7 pounds the year before. Larger production of fresh market vegetables in 1980 and a decline in melon output brought on the changes. Because of the bad weather in Mexico last fall and winter, there was a drop in imports of both vegetables and melons. The per capita data for vegetables and melons in this issue reflect revisions for 1974-78, contained in Statistical Bulletin No. 665, Vegetables: Estimates by Seasonal Groups and States, 1974-78.

Excluding potatoes, the most popular fresh vegetables in 1980 continued to be lettuce, at 27.4 pounds per person, and tomatoes and onions, both at 13.4

pounds. All three vegetables registered gains in consumption over the year before.

Processed Vegetable Consumption Down

The consumption of both canned and frozen vegetables decreased in 1980 because of lower supplies and somewhat higher prices. Use of canned vegetables fell to 52.7 pounds per person in 1980, down from 54.6 pounds (revised) the year before. Consumption of tomatoes and tomato products--the most important canned vegetable--dropped to 22.2 from 23.5 pounds per person because of the smaller 1980 pack and higher prices. Per capita consumption of canned whole tomatoes rose to 6 pounds, but tomato products dropped to 12.1 pounds, down from 14.1 pounds a year earlier.

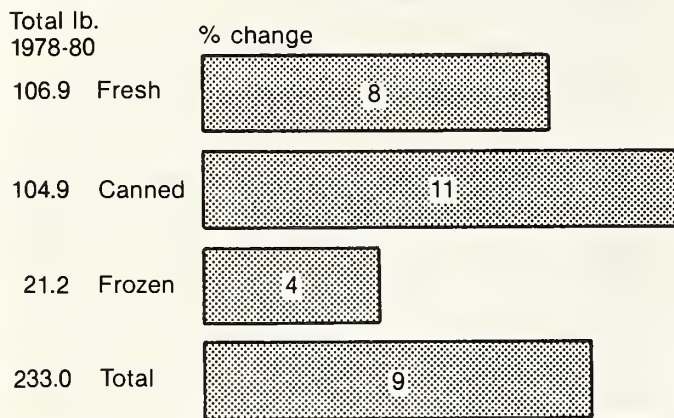
Per capita consumption of frozen vegetables also slipped in 1980, interrupting a long-time trend of annual increases. Use of frozen vegetables declined to 27.4 pounds per person, down from 29.6 pounds in 1979 and 28.4 pounds in 1978. Data on frozen vegetables include frozen potato products. Consumption of frozen potato products also fell to 16.9 pounds per person, down from 17.7 pounds in 1979 and 17.2 pounds in 1978. However, frozen potato products still accounted for 62 percent of the total frozen products consumed. Frozen corn, the second most important frozen vegetable, trailed far behind at approximately 2 pounds per person--about 7 percent of the total.

POTATOES

Growers of fall potatoes are expected to harvest 1.04 million acres (422,000 hectares) in 1981, up 6 percent from last year's small acreage but 3 percent below the 1979 level. If yields equal to the average for the past 3 years are realized the fall crop will approximate 287.1 million cwt, 9 percent above 1980. Fall-crop plantings increased to an estimated 1.06 million acres (431,000 hectares), also 6 percent above 1980.

Acreage of fall-crop potatoes for harvest in the Eastern States is estimated at 178,000 acres, the smallest on

Changes in Vegetable Consumption Per Capita Between, 1970-72 and 1978-80*

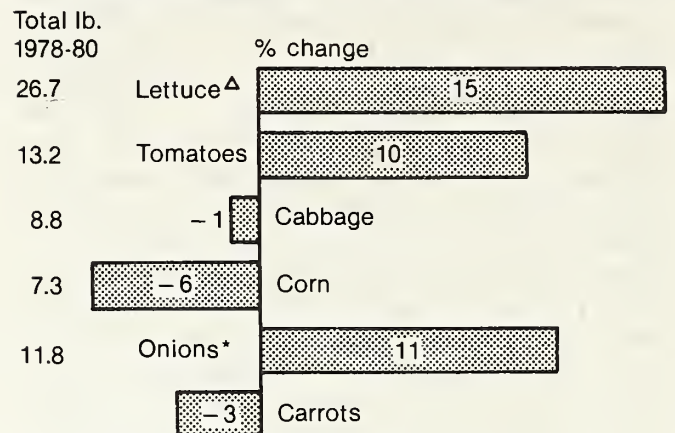


*Fresh weight basis; excludes potatoes, sweet potatoes and melons. Dehydrated onions included in fresh.

USDA

Neg. ERS 634-81 (7)

Changes in Fresh Vegetable Consumption Per Capita Between, 1970-72 and 1978-80*

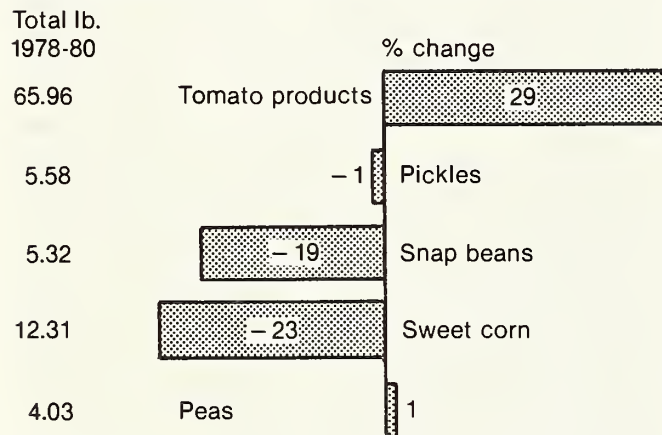


* Includes about 3 pounds of dehydrated onions. ^ΔIncludes escarol.

USDA

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Changes in Canned Vegetable Consumption Per Capita Between 1970-72 and 1978-80*

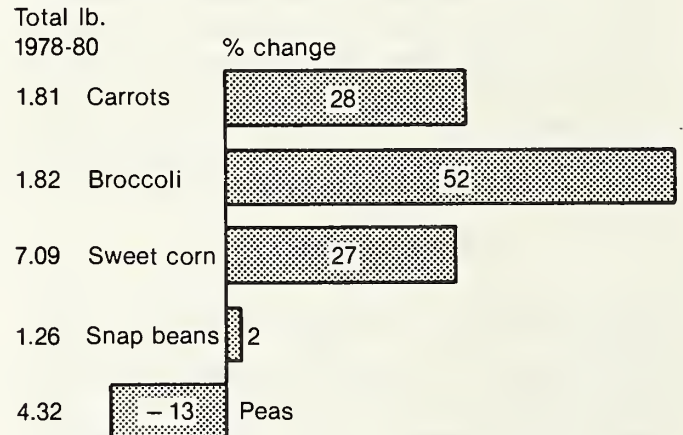


*Fresh weight basis.

USDA

Neg. ERS 8875-81 (7)

Changes in Frozen Vegetable Consumption Per Capita Between 1970-72 and 1978-80*



*Fresh weight basis.

USDA

Neg. ERS 8874-81 (7)

record. In Maine and New York, area for harvest is estimated at 104,000 and 43,800 acres, respectively,--the same as last year.

In the Central States, acreage for harvest is estimated at 293,000 acres, 3 percent more than in 1980 but 1 percent less than in 1979. North Dakota growers expect to harvest 3 percent more acres; Minnesota growers are looking for an 8-percent increase, and Wisconsin producers expect a 4-percent rise.

In the predominant Western States, fall acreage for harvest is forecast at 572,000 acres, 10 percent more than in 1980 but 2 percent less than in 1979.

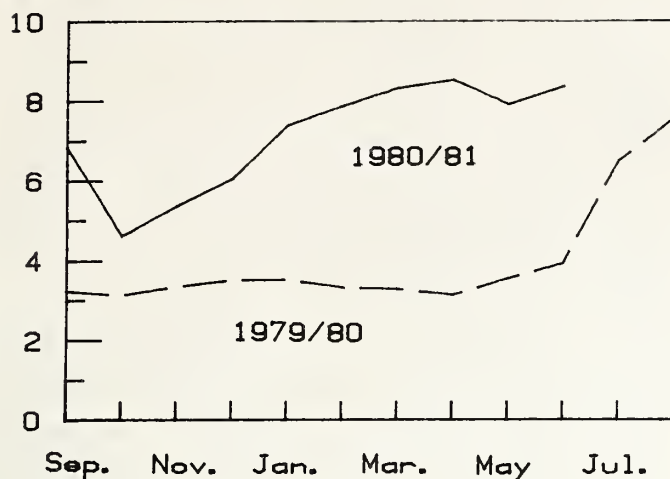
In Idaho, the Nation's leading potato-producing State, the area for harvest is estimated at 325,000 acres, 8 percent more than a year earlier. Washington growers reported the largest proportional increase with a 24-percent jump over the 1980 acreage. Acreage for harvest in Oregon is up 13 percent from a year ago.

At this time, the fall crop is in generally good condition across the country. Some unseasonably cold, wet weather and frosts interrupted and delayed plantings this spring, but crops have progressed well this summer. Harvest of the early types of fall potatoes

Potatoes:

U. S. Grower Price*

\$ Per CWT



*Crop year

USDA Neg. No. ERS-3073-81 (7)

is expected to begin in the Western region in late July or early August.

The increased plantings of fall potatoes in the Central and Western States are in response to the record high prices growers have received for potatoes during the 1980/81 marketing season. The potato industry was successful in keeping potato acreage expansion to only 6 percent. While the increase will certainly lead to a larger 1981 crop, it will not be burdensome--unless yields are phenomenal. Prices to growers will average only moderately lower than a year ago; perhaps they will be about the same in the East and 10 to 15 percent lower in the Midwest.

Processor demand this fall will be strong. On July 1, stocks of frozen potato products totaled 794 million pounds, 18 percent less than a year ago. There was a slowdown in potato processing this spring, because processors were reluctant to buy at the higher open-market prices. However, in Idaho some processors have already signed 1981/82 contracts calling for an average of \$4.27 per cwt for useables. This is more than 20 percent higher than a year ago.

The dehydrated potato market has been strong this year with no buildup in inventories. This strength is attri-

buted to a greater acceptance of instant potatoes and a continued strong export market for flakes and granules. While the USDA estimated a decreased use of potatoes for chips and shoestrings from the 1980 crop--down to 36 million cwt from 38 million--Snack Food magazine reports that a recent survey indicated that potato chip sales were up 16 percent in dollars and 5 percent in pounds in 1980. Manufacturers' dollar value of sales totaled more than \$1.9 billion. They further report that, early this spring, chippers not protected by contracts were facing the highest open-market prices in history. Red River Valley chipping potatoes were priced at \$12.50 per cwt, or more, f.o.b. Early Florida potatoes were selling for as much as \$22 per cwt. New contracts for Red River Valley potatoes for delivery during fall-winter, 1981 are reported to be 30 percent higher than a year ago.

Spring Potato Production

U.S. spring potato production was placed at 20.8 million cwt (941,000 metric tons), up 22 percent from last year's record low but 3 percent below 1979. The expected yield for the spring crop, at 265 cwt per acre, is 30 cwt above the 1980 yield. If realized, the 1981 yield will be the highest on record. The largest increases in spring potato production occurred in California, up 17 percent to 10.3 million cwt, and Florida, up 44 percent to 5 million cwt. During late June, prices for long white potatoes averaged \$10.9U per 100 pound sack (f.o.b. Kern County, California), compared with \$8.65 a year ago, when potatoes were in short supply. Prices for eastern round white potatoes in late June averaged \$13.10 a cwt (f.o.b. eastern North Carolina shipping points), compared with \$11.00 a year ago.

Summer Potatoes

The first forecast of the summer potato crop for 1981 places production at 19.9 million cwt (901,000 metric tons), 17 percent above last year's record low but still the second smallest summer crop on record. Acreage for har-

Table 3--Potatoes, Irish: Acreage, yield per acre, and production,
annual 1979, 1980, and indicated 1981

	Acreage		Yield per acre				Production		
	Harvested		For harvest 1981	1979	1980 ¹	Indicated 1981	1979	1980 ¹	Indicated 1981
	1979	1980							
	1,000 acres								
Winter	11.9	11.5	11.8	200	205	214	2.38	2.36	2.53
Spring	83.7	72.6	78.4	255	235	265	21.35	17.07	20.75
Summer	103.6	90.0	94.4	211	189	210	21.85	16.98	19.86
Total with production to date	199.2	174.1	184.6	229	209	234	45.58	36.41	43.14

¹ Revised.

Crop production, SRS, USDA, issued monthly.

vest in 1981 is set at 94,400 acres (38,200 hectares), 5 percent more than the 1980 all time low, but also the second smallest on record. Yields are expected to average 210 cwt an acre, 21 cwt above 1980 but 1 cwt below 1979. Prices for summer potatoes are strong, because stocks of 1980 fall crop potatoes are essentially gone and the 1981 summer crop is still relatively small. However, during the week of July 11, Eastern Shore Virginia round white potatoes were quoted at \$5.25 a 50-pound sack, compared with \$9.20 last year, when Virginia's crop was seriously reduced by drought.

For summer potatoes, growing conditions in Virginia have been good, with timely and adequate rainfall, in contrast with last year when dry conditions in May and June lowered yields. This year's Virginia crop is estimated at 2.24 million cwt, 45 percent more than in 1980. Excessive rainfall in Ohio and Indiana reduced this year's crop in those areas, but the crops in Texas and California have done well, and harvest began in those areas in late July.

Foreign Trade

During October, 1980-June 1981, nearly 1.8 million cwt of fresh table stock and seed potatoes moved to foreign markets. This was moderately larger than a year

earlier, when 1.4 million cwt were exported. With relatively high prices and a strong U.S. dollar partially offsetting the larger crop, 1981/82 exports of table stock potatoes are expected to remain near year-earlier levels.

Exports of dehydrated potatoes decreased this season. During October 1-June 30, exports of flakes, granules, and other dehydrated potato products totaled 27,227 metric tons, down 33 percent from a year earlier. Exports of flakes and granules were down 35 percent and exports of "other" dehydrated potato products were down 13 percent. Japan continues to be the major customer for U.S. dehydrated potatoes, accounting for more than 60 percent of total exports. The European Community (EC) is also a major customer. Canada is our most important customer for "other" dehydrated potatoes, and so far this year has increased its purchases by 9 percent over a year earlier.

Imports of fresh table stock potatoes so far this year have more than doubled from a year ago. So far this year (October through May) imports of potatoes from Canada totaled 2.1 million cwt compared with 1.0 million a year earlier. Canadian imports were given impetus by high U.S. prices, and a favorable exchange rate, which enabled Canadian potatoes to be sold at lower prices than comparable U.S. potatoes.

Potato exports¹

Crop year Oct.-Sept.	Dehy- drated	fresh	Total	Percent of crop
---Mil. cwt.---				
1974/75	1.7	4.0	5.7	2%
1975/76	10.6	10.6	21.2	6%
1976/77	15.7	10.3	26.0	7%
1977/78	6.6	3.5	10.1	3%
1978/79	8.2	2.0	10.2	3%
1980/81 ²	3.6	1.0	4.6	2%

¹Fresh weight basis. ²Oct. thru May

Imports have been particularly heavy from New Brunswick and Prince Edward Island.

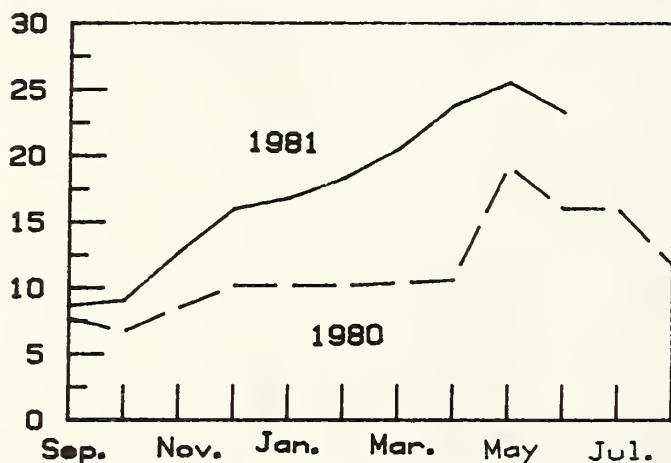
SWEETPOTATOES

Larger 1981 Acreage

Plantings of sweetpotatoes this year are estimated at 113,100 acres, up 5 percent from 1980. About 109,600 acres will be harvested. All States share in the increased acreage, except Maryland, which expects to harvest 1,300 acres, the same as last year. North Carolina, the largest producer, and Louisiana ranked second, each expect to harvest about 5 percent more acres in 1981 than a year ago. These two States usually account for more than 50 percent of total U.S. sweetpotato acreage. Despite the increases, 1981 planted acreage will still be the third smallest on record.

In North Carolina, transplanting was four-fifths complete in mid-June. This is ahead of the 1980 rate but about average for that date. The crop is in good condition. In Louisiana, moisture supplies are adequate; transplanting was ahead of schedule in mid-June; and the crop was in good condition.

Sweetpotatoes: U. S. Grower Prices \$/CWT.



USDA

Neg. ERS 3074-81 (7)

Production of sweetpotatoes in 1980 fell to a record-low 11.0 million cwt, 18 percent less than in 1979 and 16 percent below 1978. Harvested acreage was down 11 percent from a year earlier, and average yields, at 107 cwt per acre, were 10 cwt below both 1978 and 1979. Lower yields were caused by the drought in the Southeastern States.

Because of smaller supplies, grower prices for sweetpotatoes have risen steadily since last fall and in mid-May stood at \$25.50 per cwt, compared with \$11.20 in May 1980 and \$14.20 in 1979. In early June, 50-pound cartons of North Carolina US #1 Jewell cured sweetpotatoes were priced at \$22.00 in New York City wholesale markets, compared with \$8.00 a year ago.

If average yields are obtained, the 1981 sweetpotato crop will be approximately 12.8 million cwt. This will be about 17 percent larger than 1980, but still 4 percent below the 1979 crop. Grower prices will decline from current seasonal highs and will average moderately below 1980/81 levels throughout 1981/82.

Canners' stocks on April 1 totaled 1.3 million cases (24/303's basis) down 64 percent from last year's large supplies. Despite the reduced supplies of canned sweetpotatoes, prices in May were about the same as a year earlier. Cases of 24/303 sirup pack whole sweetpotatoes were listed at \$11.00, the same as in May 1980.

With small stocks and the usual seasonal decline in sales of canned sweetpotatoes, the market for this item is very quiet. The larger harvest this fall will be eagerly awaited by both the fresh market and processing outlets. While prices to growers will decline from the current exceptional highs, a ready market will keep prices well above the depressed levels of 2 years ago.

MUSHROOMS

Grower prices for fresh US #1 mushrooms in bulk for repacking have been strong so far this year, ranging from 69 to 72 cents a pound and averaging 69 or 70 cents. This is 4 to 5 cents a pound higher than a year ago. During the first quarter, prices for processing

Table 4-Sweetpotatoes: Harvested acreage by State
United States

State and area	1979	1980	Indi- cated 1981 ¹	1981 as percent- age of 1980
	---1,000 acres			Percent
New Jersey	2.7	2.4	2.5	104
Maryland	1.4	1.3	1.3	100
Virginia	3.9	2.1	2.3	110
Central Atlantic	8.0	5.8	6.1	105
North Carolina	40.0	37.0	39.0	105
South Carolina	3.1	2.5	3.5	140
Georgia	5.5	4.5	5.4	120
Lower Atlantic	48.6	44.0	47.9	109
Tennessee	2.0	2.0	2.3	115
Alabama	5.7	5.3	5.4	102
Mississippi	4.7	4.6	5.2	113
Arkansas	.7	.6	--	--
Louisiana	27.0	25.0	26.0	104
Texas	7.9	6.5	7.8	120
Central	48.0	44.0	46.7	106
California	9.6	8.4	8.9	106
United States	114.2	102.2	109.6	107

¹ Indicated as of June 30.

Data from Acreage, SRS, USDA.

mushrooms were firm at 63 to 66 cents a pound but dropped in late May and throughout June averaged about 50 cents. This is about the same as a year ago when the mushroom industry petitioned the U.S. International Trade Commission (USITC) for relief from imports of processed mushrooms.

Following the USITC determination that "imports of prepared or preserved mushrooms are a substantial cause of serious injury, or the threat thereof, to the

domestic industry," the President imposed a temporary rate of duty increase on prepared or preserved mushrooms, effective November 1, 1980. On May 29, the USITC issued its thirteenth quarterly report on processed mushrooms. Among the major findings of the report are:

For the first quarter of 1981, domestic production of canned mushrooms, sales by domestic producers, and imports all decreased from a year earlier. Domestic production totaled 26 million

pounds, down 20 percent; producers sold 24.6 million pounds, down 7 percent; and imports were 16 million pounds, down 7 percent from the first quarter of 1980. The decline in production followed a substantial increase in inventories in January and February 1981, and the decrease in imports resulted from higher tariffs. Sales of domestic producers were apparently harmed by a 19-percent drop in consumption to 45 million pounds during the first quarter of 1981. First-quarter 1981 imports were equivalent to 36 percent of consumption, compared with 46 percent a year earlier. Sales of frozen mushrooms, at 4.4 million pounds, were 17 percent more than the first-quarter total in 1980.

The principal supplier of imported mushrooms in recent years has been Taiwan. The Republic of Korea and Hong Kong also have supplied substantial quantities. Beginning in 1980, the Peoples Republic of China (PRC) also became an important supplier. During the first quarter of 1981 imports from Taiwan totaled 4.3 million pounds, down 63 percent from a year earlier, and imports from Korea fell to 2 million pounds, a decrease of 72 percent. Meanwhile, imports from Hong Kong rose to 5.7 million pounds--an increase of 81 percent. Those from PRC more than doubled from 1.1 million to 2.6 million pounds. The PRC was granted most favored nation status on February 1, 1980.

Subsequent to the United States' imposition of higher tariffs on processed mushrooms, the Governments of Canada, West Germany, Switzerland, and the Commission of European Communities (on behalf of France) requested exemptions for certain mushroom products. The countries say that these products--including frozen battered and breaded mushrooms from Canada; wild mushrooms from Europe; mushrooms of the genus chanterelle (valued at more than \$8.50 a pound); and certain oriental mushrooms such as straw, golden, and oyster mushrooms--have special characteristics that set them apart from competition with U.S. mushrooms. The USITC has agreed to investigate this matter, and a public hearing was scheduled for July 30, 1981.

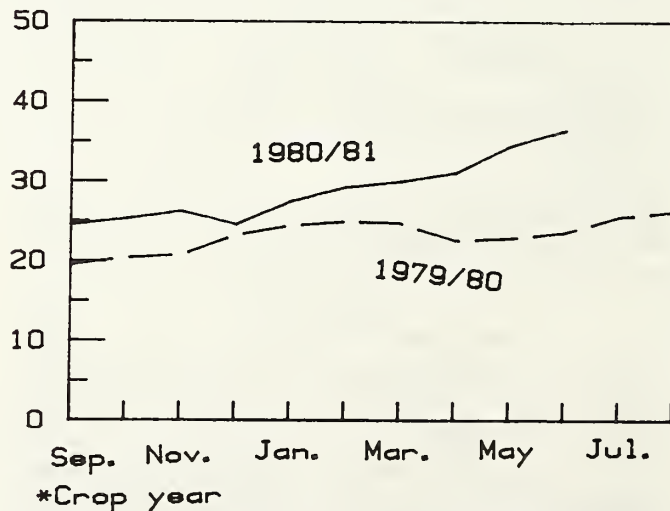
DRY EDIBLE BEANS

The U.S. acreage for harvest of dry edible beans is estimated to be 2.2 million acres, 19 percent more than a year earlier and 58 percent more than in 1979. Acreage for harvest is estimated to be up in all major producing States, except California, Montana, and New York, where acreage will likely be the same as last year. The increases are largely attributed to current high prices and the continued favorable outlook for exports. If average yields for all beans for the past 5 years are obtained, the total dry bean crop will be approximately 30 million cwt.

Average monthly grower prices for beans during the current marketing year have been substantially higher than a year ago--despite the record large crop--because of strong export demand, especially from Mexico. In September, the average grower price was \$24.50 per cwt. From that point, prices rose throughout the season and in mid-June stood at \$36.50 per cwt, 55 percent higher than in June 1980. Part of this rise in average prices reflects the sharp jump in prices for baby lima beans.

Dry Beans: U. S. Grower Price*

\$ Per CWT



USDA

Neg. No. ERS-3075-81 (7)

Table 5--Beans, dry edible: Acreage, yield per acre, and production, annual 1979, 1980, and indicated 1981 ¹

Group State and classes	Acreage		Production ²			
	Harvested		For harvest 1981 ³	1979	1980	Indicated 1981 ⁶
	1979	1980				
	1,000 acres			1,000 cwt.		
Michigan	460.0	560.0	620.0	6,440	7,448	(6)
New York	40.0	51.0	51.0	460	663	(6)
Northwest ⁴	486.7	770.0	1,031.0	8,107	11,542	(6)
Southwest ⁵	190.0	235.0	266.0	1,869	2,538	(6)
California:						
Large lima	27.0	35.0	30.0	529	753	(6)
Baby lima	29.0	20.0	27.0	656	450	(6)
Other	151.0	165.0	163.0	2,415	2,706	(6)
Total California	207.0	220.0	220.0	3,600	3,909	(6)
United States	1,383.7	1,836.0	2,188.0	20,476	26,100	(6)

¹Includes beans grown for garden seed. ²Cleaned basis. ³Indicated as of June 27. ⁴Nebraska, Montana, Idaho, Wyoming, Washington, Minnesota, and North Dakota. ⁵Kansas, Colorado, and Utah. ⁶Available in August Crop Production.

Data from Acreage, SRS, USDA.

Domestic use of dry edible beans has been steady, and buying interest in June was extremely slow, with no new export or domestic inquiries noted. However, exports through June are more than double a year ago. During September 1980-June 1981 exports of all dry beans (excluding seed) were up 122 percent to 14.2 million cwt, compared with 6.4 million during the same period in 1979/80.

By Classes--Navy Beans

It is difficult at this time to determine how much larger the navy bean crop will be. While the Michigan acreage for harvest is up 11 percent Michigan also grows kidney, black turtle, and pinto beans. A major expansion is expected in these beans in res-

ponse to the strong export demand. However, 1980 navy beans were down 6 percent from the 1979 harvest, which was the largest since 1974. September-June exports of navy beans were 53 percent larger than a year earlier.

Dealer prices for navy beans have risen steadily from a low of \$20.50 per cwt in May 1980 to an average of \$43.75 during the first week of July 1981. Smaller supplies and a good export market have kept prices on the rise. Although demand was slow in late June, there was a relatively small quantity of beans available for trade. Both foreign and domestic inventories are low, with buyers waiting for a break in price and the new crop. Trade sources believe the old crop will be completely sold before the new crop is harvested in September.

This year, the largest importer of navy beans, as usual, is the United Kingdom. Canada, the Netherlands, Ireland, Germany, and Japan also made sizeable purchases.

Great Northerns

Prices of great northerns in Idaho and Nebraska also climbed steadily throughout the marketing year, from an average of \$27.75 per cwt in June 1980 to \$39.00 the first week of July. Production in 1980, at 2.1 million cwt, was 4 percent larger than a year earlier. Exports during September 1979-May 1980 rose 56 percent.

Heavy volume importers of great northerns so far this year are Algeria, France, Japan, Bulgaria, Angola, Tunisia, and Belgium/Luxembourg.

Pintos

Following the pattern of other classes, prices for pinto beans have been high throughout the year. But prices for pintos were higher than for navies and great northerns because of a stronger Mexican demand. June 1980 prices for pinto beans averaged \$35 per cwt. Prices dipped between \$31 and \$32 at harvest time but rebounded to \$35 in January. Prices began to escalate in April and in, mid-June, were fluctuating around \$45 after the news of Mexico's purchases from the 1981 crop.

Export sales of pinto beans through June totaled 313,256 metric tons, of which 279,163 metric tons, or 89 percent, were shipped to Mexico. Angola purchased 20,763 the Dominican Republic, 3,946, and the Netherlands 3,308 tons.

The Outlook

Because of the strong Mexican demand and favorable prices this year, growers have increased their acreage of dry beans by 19 percent over 1980. It is expected that this rise in acreage will involve mostly the pintos, pinks, small reds, and red kidney beans, with smaller increases for black turtle beans. In view of the high prices for all dry edible beans this year, apparently all beans--both white and colored classes--

will share in the acreage increases. However, in California, the acreage of baby lima beans will be expanded at the expense of large lima beans. Throughout most of this marketing year, prices of baby lima beans have been over \$50 per cwt--more than double a year ago--while prices of large lima beans have been below the previous year.

According to the Foreign Agricultural Service (FAS), the estimate of Mexican dry bean imports during 1980/81 (October-September) was raised to 375,000 tons. Of these, 360,000 tons are 1980 crop beans from the United States and 15,000 tons from Canada's crop. About 375,000 tons of 1981 crop beans have been purchased for September-December delivery to Mexico. The central Mexican purchasing agency believes its import requirements are now covered through the remainder of calendar year 1981 and into the first half of 1982. FAS further states, "If, however, Mexico does not obtain the programmed increase in production from the upcoming 1981 fall harvest--targeted at 1.1 million tons--we almost certainly will see CONASUPO attempt to negotiate for additional imports from the 1981 crop. If this should occur, our 1981/82 import estimate would be increased accordingly."

With some reductions in acreages of beans that are currently low priced and continued strong foreign demand at least through the first half of 1982, prices for the major dry bean classes will likely average about the same as--or only slightly lower--than last year. However, the Government of Mexico has a strong program to reach self-sufficiency in bean production in 1982. If it appears they will be successful, exports of U.S. beans will probably drop and prices for major classes will average somewhat lower during 1982.

DRY PEAS AND LENTILS

Growers in Idaho and Washington expect to harvest 112,000 acres of dry peas this season, a 17-percent decline from a year ago. Both Washington and Idaho reduced their planted acreages.

The American Dry Pea and Lentil Association reported that domestic movement of peas during July 1, 1980-May 30,

Table 6-Peas, dry field: Acreage, planted and harvest, annual 1979, 1980, and acreage for harvest 1981 ¹

State	Acreage					
	Planted			Harvested		
	1979	1980	1981	1979	1980	For Harvest 1981
---1,000 acres---						
Idaho	53.0	64.0	53.0	51.0	63.0	52.0
Washington	86.0	75.0	62.0	85.0	72.0	60.0
United States	139.0	139.0	115.0	136.0	135.0	112.0

¹ Excludes peas grown for seed.

Date from Acreage, SRS, USDA.

1981 increased to 66.4 million pounds up only 1 percent although production was up more than three-fifths above 1979. Domestic lentil movement was up 12 percent, offsetting the 12-percent drop of a year earlier. It appears that the domestic market will absorb a fairly constant amount of peas and lentils, regardless of supplies or prices.

Between September 1, 1980, and June 30, 1981, exports totaled 203 million pounds, up 61 percent from the 126 million pounds exported a year earlier. Lentil exports totaled 129.0 million pounds, up 30 percent from the 99.0 million pounds exported in 1979/80. Algeria, Colombia, Taiwan, Venezuela, and Canada are our largest customers for dry peas and lentils. Most of Canada's

imports are seed peas. India, a new customer, has purchased 8,305 tons of green and Austrian winter peas this year. Egypt purchased 10,959 tons of U.S. lentils under the Commodity Import Program.

Because of the larger crop last year, grower prices for peas averaged lower in 1980/81 than a year earlier. Even with a smaller crop in prospect this fall, prices in early July averaged \$10 per cwt compared with \$12 in July 1980. With a substantially smaller crop in prospect for 1981, grower prices will improve later this season. Foreign demand will play an important part in actual prices growers will receive for peas and lentils this year.

Table 7--Commercially produced vegetables: Civilian per capita consumption, averages 1947-49, 1957-59, and 1965 to date

Period	Fresh equivalent			As percentage of annual total					
	Total fresh and processed	Processed 2		Fresh	Processed				
		Fresh 1	Total 1		Canned	Frozen	Total	Canned	Frozen
		Pounds		Percent					
1947-49	199.7	120.5	79.2	72.6	6.6	60.3	39.7	36.4	3.3
1957-59	199.7	104.1	95.6	81.1	14.5	52.1	47.9	40.6	7.3
Year									
1965	201.0	98.3	102.7	85.3	17.4	48.9	51.1	42.4	8.7
1966	201.5	95.9	105.6	86.7	18.9	47.6	52.4	43.0	9.4
1967	209.4	98.2	111.2	91.3	19.9	46.9	53.1	43.6	9.5
1968	214.9	101.2	113.7	92.7	21.0	47.1	52.9	43.1	9.8
1969	212.9	98.7	114.2	94.9	19.3	46.4	53.6	44.6	9.0
1970	213.8	99.2	114.6	94.0	20.6	46.4	53.6	44.0	9.6
1971	212.0	98.2	113.8	93.6	20.2	46.3	53.7	44.2	9.5
1972	216.0	99.3	116.7	96.3	20.4	46.0	54.0	44.6	9.4
1973	224.1	100.6	123.5	101.6	21.9	44.9	55.1	45.3	9.8
1974	224.7	102.9	121.8	100.9	20.9	45.8	54.2	44.9	9.3
1975	223.7	102.0	121.7	101.9	19.8	45.6	54.4	45.6	8.8
1976	227.7	104.3	123.4	102.9	20.5	45.8	54.2	45.2	9.0
1977	229.1	103.9	125.2	104.1	21.1	45.4	54.6	45.4	9.2
1978	227.6	107.1	120.5	98.7	21.8	47.1	52.9	43.4	9.6
1979	235.7	110.1	125.6	101.7	23.4	46.7	53.3	43.1	10.0
1980 3	236.0	111.0	125.3	106.0	19.3	46.5	53.5	44.4	9.0

¹Includes dehydrated onions and excludes melons. ²Data includes pickles and sauerkraut in bulk; excludes canned and frozen potatoes, canned sweetpotatoes, canned baby foods and canned soups. ³Preliminary.

Table 8-Potatoes, sweetpotatoes, dry edible beans, and dry field peas: Per capita consumption, primary distribution weight, averages 1947-49, 1957-59 and annual 1965 to date¹

Period	Potatoes ²	Sweet-potatoes ³	Dry edible beans ⁴	Dry field peas ⁵
Pounds				
1947-49	114	13.0	6.7	0.6
1957-59	107	8.3	7.7	.6
Year				
1965	108	6.2	6.6	.4
1966	118	6.3	6.3	.4
1967	108	5.8	6.9	.2
1968	115	5.7	6.4	.3
1969	117	5.7	6.9	.3
1970	118	5.6	5.9	.3
1971	119	4.9	5.9	.3
1972	119	5.1	6.3	.3
1973	117	5.1	6.4	.5
1974	114	5.5	6.7	.4
1975	122	5.5	6.5	.4
1976	116	5.4	6.2	.4
1977	122	5.0	6.1	.2
1978	122	5.5	5.9	.4
1979	121	5.7	6.4	.4
1980 ⁶	116	5.7	6.5	.4

¹ Civilian consumption only. ² Farm weight basis, calendar years. Includes farm garden produce but not nonfarm. Includes table-stock and processed potatoes. ³ Includes canned sweet-potatoes. ⁴ Cleaned basis, calendar years. ⁵ Cleaned basis, crop years beginning approximately September of year indicated.

⁶ Preliminary.

Table 9-Civilian per capita consumption of selected commercially produced fresh and processed vegetables¹
United States, calendar years 1970-80

Commodity	Fresh equivalent basis										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
	Pounds										
Asparagus											
Fresh	.50	.40	.50	.40	.40	.40	.40	.40	.30	.30	.30
Canned	.81	.73	.70	.84	.62	.64	.67	.48	.46	.34	.34
Frozen	.28	.24	.19	.21	.19	.17	.21	.17	.17	.14	.12
Beans, lima ³											
Fresh	--	--	--	--	--	--	--	--	--	--	--
Canned	.54	.50	.44	.44	.42	.37	.41	.48	.40	.22	.19
Frozen	1.50	1.35	1.45	1.46	1.32	1.14	1.00	1.12	1.03	1.04	.99
Beans, snap											
Fresh	1.70	1.60	1.60	1.60	1.50	1.60	1.60	1.50	1.40	1.40	1.40
Canned	3.98	4.01	3.99	4.03	4.06	3.84	4.13	4.06	3.90	4.17	4.03
Frozen	1.24	1.22	1.26	1.34	1.27	1.04	1.35	1.18	1.19	1.42	1.16
Broccoli											
Fresh	.50	.70	.70	.80	.80	1.00	1.10	1.20	1.30	1.20	1.80
Frozen	1.10	1.19	1.32	1.41	1.38	1.27	1.38	1.53	1.83	1.78	1.86
Cabbage											
Fresh	8.80	9.20	8.80	9.00	9.10	9.10	8.80	8.50	8.90	8.50	9.00
Canned ⁴	2.37	2.47	2.19	2.19	2.40	2.11	2.24	2.22	2.10	1.63	1.90
Corn ⁵											
Fresh	7.90	7.50	7.90	8.00	7.60	7.80	8.10	7.70	7.40	7.30	7.20
Canned	14.66	15.18	15.98	15.79	14.84	12.58	14.15	15.43	14.66	13.32	8.96
Frozen	5.96	5.41	5.41	5.88	5.78	5.69	5.77	6.56	6.75	7.35	7.18
Cucumbers											
Fresh	3.20	3.10	3.30	3.00	3.40	3.10	3.60	3.90	4.20	4.30	4.30
Canned ⁶	5.50	5.65	5.83	5.93	5.79	5.83	6.24	6.12	6.27	6.23	4.23
Peas, green ³											
Fresh	--	--	--	--	--	--	--	--	--	--	--
Canned	7.06	6.86	6.87	7.71	6.35	6.26	6.57	7.01	6.45	4.22	5.29
Frozen	5.04	4.92	4.92	4.80	4.74	4.64	4.42	4.14	4.15	4.64	4.18
Spinach											
Fresh	.50	.50	.40	.50	.40	.50	.50	.60	.60	.70	.80
Canned	.62	.58	.64	.73	.69	.49	.47	.46	.55	.75	.66
Frozen	.97	1.04	1.03	.96	1.13	.93	1.02	1.05	1.05	1.25	1.08
Tomatoes											
Fresh	12.30	11.40	12.20	12.60	11.80	11.90	12.60	12.40	13.20	12.90	13.40
Canned ⁷	51.30	50.39	51.96	55.17	57.84	62.45	61.15	61.56	59.26	63.59	75.03

¹ Data for processed vegetables excludes quantities consumed in commercially produced soups, and baby foods and in canned wholesale mixtures such as peas and carrots and succotash. ² Preliminary. ³ "In pod" basis. ⁴ Sauerkraut, canned and bulk. ⁵ "On-cob" basis. ⁶ Pickles, canned and bulk. ⁷ Including canned whole tomatoes and tomato products other than soup.

Table 10—Fresh vegetables and melons, commercial: Per capita consumption, farm weight, averages 1947-49, 1957-59, and 1965 to date¹

Period	Vegetables															Total
	Leafy, green and yellow															
	Toma- toes	Arti- chokes	Aspara- gus	Lima beans (un- shelled)	Snap beans	Broc- coli	Brus- sels sprouts	Cab- bage	Carrots	Kale	Lettuce	Green peas (un- shelled)	Pep- pers	Spinach	Minor	
Pounds																
1947-49	13.8	.2	1.0	.6	4.1	.9	.2	16.1	8.8	.2	18.6	.9	2.1	1.9	6.3	61.9
1957-59	12.4	.2	.8	.3	2.7	.4	.1	10.6	7.3	.2	20.3	.3	2.2	1.0	5.2	51.6
Year																
1965	12.0	.3	.6	.3	2.0	.3	.1	8.9	7.0	.1	21.7	.2	2.3	.6	4.6	49.0
1966	12.4	.3	.4	.3	1.9	.3	(²)	8.9	6.4	.1	21.6	.2	2.4	.6	4.0	47.4
1967	12.4	.4	.4	.3	2.0	.3	(²)	9.1	6.5	.1	22.1	.1	2.6	.6	3.6	48.2
1968	11.9	.3	.5	(³)	1.9	.4	(²)	9.3	7.5	(³)	22.5	(³)	2.8	.6	5.5	51.3
1969	11.9	.3	.4	(³)	1.8	.4	(²)	8.9	6.0	(³)	22.5	(³)	2.6	.5	4.4	47.8
1970	12.3	.3	.5	(³)	1.7	.5	(²)	8.8	5.9	(³)	22.4	(³)	2.4	.5	4.7	47.7
1971	11.4	.4	.4	(³)	1.6	.7	(²)	9.2	6.1	(³)	23.2	(³)	2.5	.5	4.5	49.1
1972	12.1	.3	.5	(³)	1.6	.7	(²)	8.8	6.6	(³)	23.3	(³)	2.7	.4	4.6	49.5
1973	12.5	.3	.4	(³)	1.6	.8	(²)	9.0	6.7	(³)	23.9	(³)	3.0	.5	4.4	50.2
1974	11.8	.3	.4	(³)	1.5	.8	(²)	9.1	7.0	(³)	24.5	(³)	3.0	.5	4.3	51.4
1975	11.9	.3	.4	(³)	1.6	1.0	(²)	9.2	6.5	(³)	24.5	(³)	3.1	.5	4.3	51.4
1976	12.6	.4	.4	(³)	1.6	1.1	(²)	8.8	6.7	(³)	24.3	(³)	3.3	.6	3.7	50.9
1977	12.5	.3	.3	(³)	1.5	1.3	(²)	8.5	5.4	(³)	25.1	(³)	3.4	.7	3.8	50.3
1978	13.2	.2	.3	(³)	1.4	1.3	(²)	8.9	5.7	(³)	26.6	(³)	3.5	.5	2.8	51.2
1979	12.9	.4	.3	(³)	1.4	1.4	(²)	8.5	5.8	(³)	25.9	(³)	3.6	.7	5.2	52.3
1980 ⁴	13.4	.3	.3	(³)	1.4	1.8	(²)	9.0	6.3	(³)	27.4	(³)	3.6	.8	6.2	57.1
Melons																
Period	Vegetables										Total				Dehy- drated onions	
	Other										Total					
	Beets	Cauli- flower ⁵	Celery	Corn	Cucum- bers	Egg plant	Garlic	Onions and shal- lots ^{6,7}	Minor	Total	Water melons	Canta- loup	Total melons	Total vege- tables and melons		
Year	Pounds															
1947-49	1.3	3.3	8.2	8.0	2.6	.4	.2	12.0	8.8	44.8	120.5	17.8	9.6	27.4	147.9	
1957-59 . . . .	.7	1.3	8.0	8.3	2.8	.4	.3	11.7	6.6	40.1	104.1	16.9	8.2	25.1	129.2	
1965 . . . .	.5	1.0	6.7	8.1	3.1	.4	.4	11.4	5.7	37.3	98.3	15.7	7.9	23.6	121.9	
1966 . . . .	.4	1.0	6.9	7.4	3.0	.4	.3	11.5	5.2	36.1	95.9	14.8	7.3	22.1	118.0	
1967 . . . .	.4	1.0	6.8	8.0	3.1	.4	.4	12.1	5.4	37.6	98.2	14.2	8.1	22.3	120.5	
1968	(³)	1.0	7.2	7.8	2.9	.4	.5	11.9	6.3	38.0	101.2	14.4	8.6	23.0	124.2	
1969	(³)	.9	7.3	8.0	3.2	.4	.5	12.5	6.4	39.2	98.9	13.8	9.1	22.9	121.8	
1970	(³)	.7	7.2	7.9	3.2	.4	.5	11.9	6.3	38.1	98.1	14.4	8.9	23.3	122.1	
1971	(³)	.7	7.3	7.5	3.1	.4	.3	10.1	6.1	35.5	95.9	14.1	8.5	22.6	118.6	2.5
1972	(³)	.8	7.1	7.9	3.3	.5	.4	9.9	5.7	35.6	97.2	13.2	8.7	21.9	119.2	2.0
1973	(³)	.8	7.6	8.0	3.0	.6	.5	9.2	5.7	35.4	98.0	13.8	8.0	21.8	120.0	2.4
1974	(³)	.8	7.4	7.7	3.4	.5	.7	10.5	5.6	36.6	99.8	11.9	7.0	18.9	118.9	2.8
1975	(³)	.9	7.0	7.9	3.2	.5	.5	9.8	5.4	35.5	98.9	12.2	6.9	19.1	118.1	3.0
1976	(³)	1.0	7.5	8.2	3.7	.7	.5	10.1	5.1	36.8	100.3	13.5	7.0	20.5	120.9	2.3
1977	(³)	1.1	7.2	7.6	4.0	.6	.6	10.1	4.7	35.9	98.7	13.5	7.7	21.3	119.8	2.7
1978	(³)	1.0	7.0	7.5	4.3	.5	.8	10.6	4.1	35.8	100.1	13.2	9.1	22.3	122.6	2.6
1979	(³)	1.3	7.5	7.4	4.3	.7	1.1	11.8	4.3	48.4	104.0	12.5	8.9	21.4	124.5	3.0
1980 ⁴	(³)	1.4	7.8	7.2	4.3	.6	1.0	13.4	4.8	40.5	111.0	11.4	7.2	18.6	129.6	2.6

¹ Excludes quantities produced in home gardens. ² Less than 0.05 pound. ³ Included in minor vegetables. ⁴ Preliminary. ⁵ Close trim basis since 1954; slight trim basis in prior years. ⁶ Includes 0.1 pound of shallots each year through 1958; 1959 through 1967 less than 0.05 pound; since 1968, included in minor vegetables. ⁷ Excludes dehydrated onions beginning 1971.

Table 11—Canned vegetables: Per capita consumption, processed weight, averages 1947-49, 1957-59 and annual 1965 to date¹

Period	Leafy, green and yellow vegetables						Tomato products						Other vegetables						
	Asparagus	Lima beans	Snap beans	Carrots	Peas	Pumpkin and squash	Spinach	Whole tomatoes	Catsup and chili sauce	Paste and sauce	Pulp and puree	Tomato and other vegetable juices ²	Beets	Corn	Pickles	Sauerkraut	Sweet potatoes	Other ³	Total
Pounds																			
1947-49 . . .	.6	.4	2.8	.4	5.7	.6	1.1	4.3	2.5	2.4	.9	4.2	1.1	5.2	3.3	1.8	.4	1.4	39.1
1957-59 . . .	.8	.4	4.1	.5	4.8	.6	1.0	4.6	3.5	3.4	.7	5.0	1.4	5.3	4.5	1.6	1.0	1.6	44.8
Year																			
1965 . . . . .	.8	.3	4.8	.6	4.1	.5	.8	4.5	5.0	⁴ 3.9	.8	4.7	1.4	5.5	6.2	1.4	1.3	2.1	48.7
1966 . . . . .	.7	.2	5.1	.7	4.2	.5	.7	4.6	4.8	⁴ 4.2	1.0	4.4	1.4	5.2	6.6	1.4	1.2	2.1	49.0
1967 . . . . .	.7	.4	5.1	.7	4.1	.5	.7	4.6	4.7	⁴ 5.0	1.0	4.2	1.4	5.4	7.3	1.4	1.1	2.3	50.6
1968 . . . . .	.7	.3	5.5	.6	4.2	.6	.8	4.9	⁵ 9.8		1.1	4.0	1.3	5.8	7.7	1.6	1.3	2.1	52.3
1969 . . . . .	.7	.4	5.7	.6	4.1	.5	.6	4.9	⁵ 10.1		1.0	4.1	1.5	6.1	7.7	1.4	1.5	2.8	53.7
1970 . . . . .	.7	.4	5.8	.6	3.9	.5	.8	4.8	⁵ 10.1		1.0	4.1	1.5	5.9	7.4	1.5	1.2	2.7	52.9
1971 . . . . .	.6	.4	5.9	.6	3.8	.5	.7	4.9	⁵ 9.9		1.0	3.9	1.4	6.2	7.6	1.6	1.2	4.1	54.3
1972 . . . . .	.6	.3	5.8	.8	3.8	.6	.8	5.1	⁵ 10.2		1.1	3.7	1.5	6.5	7.8	1.4	1.1	4.1	55.2
1973 . . . . .	.7	.3	5.9	.6	4.3	.6	.9	5.8	⁵ 11.3		1.1	3.3	1.3	6.4	8.0	1.4	1.3	4.5	57.7
1974 . . . . .	.5	.3	5.9	.6	3.5	.6	.9	5.0	⁵ 12.0		1.2	3.6	1.3	6.0	7.8	1.5	1.5	4.7	56.9
1975 . . . . .	.5	.3	5.6	.6	3.4	.6	.6	4.9	⁵ 13.5		1.1	3.6	1.3	5.1	7.8	1.3	.9	4.0	55.1
1976 . . . . .	.6	.3	6.0	.5	3.6	.5	.6	5.2	⁵ 13.3		1.1	2.8	1.4	5.7	8.4	1.4	.9	3.4	55.7
1977 . . . . .	.4	.4	5.9	.6	3.9	.4	.6	5.0	⁵ 13.6		.9	3.1	1.4	6.3	8.0	1.4	.8	3.2	55.9
1978 . . . . .	.4	.3	5.7	.5	3.6	.4	.7	5.1	⁵ 12.8		1.0	3.0	1.4	6.0	8.4	1.3	1.0	2.6	54.2
1979 . . . . .	.3	.4	6.0	.5	3.2	.6	.8	5.8	⁵ 14.1		.8	2.8	1.0	5.5	8.6	1.3	1.1	2.5	54.6
1980 ⁶ . . .	.3	.3	6.3	.5	3.4	.4	.5	6.1	12.1		.8	3.2	1.3	6.0	7.1	1.2	1.0	2.2	52.7

¹ Excludes soups and baby food. Civilian consumption only. ² Based on information available for 1944-46, tomato juice comprises approximately 85 percent of the total, combination vegetable juices 13 percent, and other vegetable juices 2 percent. Combination vegetable juice contains approximately 70 percent or more tomato juice. ³ Includes miscellaneous greens, pimientos, potatoes, mixed vegetables, and all items, especially in earlier years, for which no separate data are available. ⁴ Estimated. ⁵ Estimate combines paste, sauce, catsup and chili sauce. ⁶ Preliminary.

Table 12—Vegetables, frozen: Per capita consumption, processed weight, averages 1947-49, 1957-59 and annual 1965 to date¹

Period	Leafy, green and yellow vegetables										Other vegetables							Potato prod-ucts	Total ³
	Aspara-ugs	Snap beans	Lima beans	Car-rots	Peas	Peas and carrots	Pump-kin and squash	Broc-coli	Brus-sels sprouts	South-ern greens	Spin-ach	Other ²	Cauli-flower	Corn cut-basis	Succo-tash	Onions	Rhu-barb		
1947-49 .	.13	.28	.42	.07	.82	.05	.05	.16	.08	(⁴)	.27	.10	.08	.23	.04	(⁴)	.04	.04	12.86
1957-59 .	.17	.77	.71	.26	1.61	.12	.10	.55	.19	(⁴)	.57	.61	.17	.65	.06	(⁴)	.03	1.56	8.13
Year										--- Pounds---									
1965 . .	.15	.91	.69	.51	1.98	(⁴)	.07	.68	.22	(⁴)	.62	.89	.20	1.13	(⁴)	(⁴)	.03	5.72	13.80
1966 . .	.16	1.06	.70	.55	2.05	(⁴)	.10	.71	.20	(⁴)	.68	1.08	.25	1.26	(⁴)	(⁴)	.03	6.93	15.76
1967 . .	.17	.90	.73	.66	1.88	(⁴)	.10	.77	.20	(⁴)	.70	1.07	.25	1.60	(⁴)	(⁴)	.03	7.58	16.64
1968 . .	.16	1.00	.74	.73	2.08	(⁴)	.12	.79	.18	(⁴)	.70	1.12	.26	1.59	(⁴)	.16	.03	8.50	18.16
1969 . .	.15	.97	.63	.72	1.78	(⁴)	.13	.84	.23	(⁴)	.67	1.02	.30	1.44	(⁴)	.18	.04	9.84	18.94
1970 . .	.14	1.05	.71	.76	1.86	(⁴)	.13	.83	.22	(⁴)	.68	1.07	.30	1.61	(⁴)	.25	.04	11.10	20.75
1971 . .	.12	1.04	.64	.74	1.81	(⁴)	.14	.90	.22	(⁴)	.73	1.18	.35	1.47	(⁴)	.34	.04	12.12	21.84
1972 . .	.10	1.07	.69	.81	1.81	(⁴)	.10	.99	.20	(⁴)	.72	1.12	.35	1.46	(⁴)	.51	.04	12.25	22.22
1973 . .	.11	1.14	.69	.99	1.76	(⁴)	.16	1.06	.23	(⁴)	.67	1.32	.37	1.60	(⁴)	.53	.06	13.18	23.79
1974 . .	.10	1.07	.63	1.00	1.74	(⁴)	.10	1.04	.26	(⁴)	.78	.96	.41	1.56	(⁴)	.48	.06	13.09	23.20
1975 . .	.09	.88	.55	.89	1.71	(⁴)	(⁴)	.95	.23	.34	.65	.89	.35	1.53	(⁴)	.58	(⁴)	13.73	23.28
1976 . .	.11	1.14	.47	.92	1.63	(⁴)	(⁴)	1.04	.25	.25	.71	1.12	.39	1.56	(⁴)	.65	(⁴)	14.56	24.70
1977 . .	.09	1.00	.53	.99	1.52	(⁴)	(⁴)	1.15	.24	.35	.73	.87	.41	1.77	(⁴)	.68	(⁴)	15.73	25.95
1978 . .	.09	1.03	.50	1.00	1.55	(⁴)	(⁴)	1.40	.28	.31	.75	.90	.48	1.86	(⁴)	.71	(⁴)	17.24	27.90
1979 . .	.08	1.23	.51	1.09	1.74	(⁴)	(⁴)	1.37	.29	.37	.73	.80	.50	2.03	(⁴)	.74	(⁴)	17.23	28.97
1980 ⁵ .	.07	1.01	.48	1.00	1.54	(⁴)	(⁴)	1.43	.25	.77	.67	.67	.48	1.98	(⁴)	.68	(⁴)	16.89	27.26

¹ Civilian consumption only. ² Included with leafy, green and yellow because most items included are considered to be green. ³ Computed from unrounded data. ⁴ Included with "other". ⁵ Preliminary.

Table 13--Vegetables, fresh: Representative prices for stock of generally good quality and condition (U.S. No. 1 when available), New York, Chicago, and shipping point, indicated periods, 1980 and 1981

			Tuesday					
Market and commodity	State of origin	Unit	1980			1981		
			May 6	June 3	July 1	May 5	June 2	July 7
Dollars								
Terminal markets:								
New York								
Beans, snap, green	Florida	Bu. basket	9.00	--	--	10.50	9.00	--
Broccoli	California	14-bchs., crt. & ctn.	9.50	9.50	7.50	8.75	11.50	11.00
Cabbage								
Domestic, round type	New York	Various used crates	4.25	--	--	6.25	--	--
Cantaloups	California	36's jumbo crt.	34.00	15.50	20.00	39.00	10.00	15.00
Carrots, topped, washed	California	48-1 lb. film bag ctn.	7.50	7.75	9.50	10.00	11.00	9.50
Cauliflower	California	Carton 12's	13.50	11.50	13.00	10.00	15.00	12.00
Celery								
Pascal	California	2-3 doz., crt.	13.00	10.50	10.50	17.00	16.00	13.00
Lettuce, Iceberg	California	2 doz., ctn.	15.00	10.00	8.00	11.50	9.50	10.00
Spinach, Savoy	New Jersey	Bu. basket	--	--	--	--	--	--
Tomatoes	Florida	8 lb. bskt., med.	12.50	13.50	--	10.50	10.75	9.50
Chicago								
Broccoli	California	14's crt. & ctn.	9.50	8.25	8.00	9.25	11.25	10.00
Cabbage								
Domestic, round type	Texas	Various used crates	5.50	8.50	8.00	6.00	6.75	--
Cantaloups	California	18's jumbo crt.	--	13.00	10.50	--	--	13.50
Carrots, topped, washed	California	48-1 lb. film bag, ctn.	8.00	8.25	10.00	10.00	11.75	10.50
Cauliflower	California	Film wrpd., ctns, 12's	13.00	11.00	11.00	9.75	12.50	13.00
Celery								
Pascal	California	2-3 doz., crt.	13.50	10.25	11.50	16.50	15.50	15.50
Pascal	Florida	2-4 doz., crt.	9.50	--	--	15.00	15.50	--
Cucumbers	Florida	Bu. basket	9.50	11.50	--	15.50	9.50	--
Honeydews	Texas	2/3-flat crt. 6-8's	--	8.00	7.25	--	7.50	6.50
Lettuce, Iceberg	California	2 doz. heads, ctn.	14.50	8.75	6.75	9.50	9.75	10.00
Spinach, flat type	Illinois	Bu. basket	--	--	--	--	--	--
Tomatoes	Florida	30-lb. carton med.-lge.	14.50	12.25	--	10.50	10.00	9.50
Week ended								
			1980			1981		
			May 10	June 6	July 7	May 9	June 6	July 4
Dollars								
F.o.b. shipping point:								
Onions, medium	Texas	50 lb. sack Grano	3.44	8.00	--	9.00	--	7.00
Onions, medium	California	50 lb. sack Grano	--	8.43	--	10.00	--	--
Watermelons	Florida	25 lb. av. and larger per cwt.	--	6.25	6.58	11.00	7.45	5.00

Table 14--Fresh Vegetables: Retail price, marketing margin, and grower and packer return per unit, sold in New York City, indicated months, 1980 and 1981

Commodity, month, and retail unit	Retail price ¹	Marketing margin		Grower and packer return (Fob shipping point prices) ^{2 3}	
		Absolute	Percentage of retail price	Absolute	Percentage of retail price
	Cents	Cents	Percent	Cents	Percent
Cabbage (lb.)					
April 1981	27.0	20.6	76	6.4	24
March 1981	27.0	20.6	76	6.4	24
April 1980	21.0	15.9	76	5.1	24
Carrots (lb.)					
April 1981	37.0	25.2	68	11.8	32
March 1981	39.0	26.3	68	12.7	32
April 1980	31.5	23.4	74	8.1	26
Celery (lb.)					
April 1981	25.4	18.9	74	6.5	26
March 1981	30.1	22.8	76	7.3	24
April 1980	27.8	16.5	59	11.3	41
Corn, sweet (doz. ears)					
April 1981	384.0	224.0	58	160.0	42
March 1981	N.A.	N.A.	N.A.	224.0	N.A.
April 1980	348.0	233.6	67	114.4	33
Cucumbers (lb.)					
April 1981	61.4	41.2	67	20.2	33
March 1981	58.9	41.7	71	17.2	29
April 1980	47.4	17.6	37	29.8	63
Lettuce (head)					
April 1981	64.0	47.4	74	16.6	26
March 1981	69.0	52.6	76	16.4	24
April 1980	79.0	47.6	60	31.4	40
Onions, dry yellow (lb.)					
April 1981	54.0	33.3	62	20.7	38
March 1981	42.0	22.6	54	19.4	46
April 1980	26.0	19.4	74	6.8	22
Peppers, green (lb.)					
April 1981	184.0	57.3	31	126.7	69
March 1981	174.0	56.4	32	117.6	68
April 1980	69.0	41.8	61	27.2	39
Tomatoes, vine-ripe (lb.)					
April 1981	164.0	93.4	57	70.6	43
March 1981	139.0	68.4	49	70.6	51
April 1980	74.0	33.2	45	40.8	55

¹Retail prices N.Y. State Department of Agriculture. ²For quantity of product equivalent to retail unit sold to consumers; because of waste and spoilage during marketing, equivalent quantity exceeds retail unit. ³Production areas; Cabbage-FLORIDA, Carrots-CALIFORNIA, Celery-CALIFORNIA, Corn-FLORIDA, Cucumbers-FLORIDA, Lettuce-CALIFORNIA, Onions-TEXAS, Peppers-FLORIDA, Tomatoes-FLORIDA.

Table 15--Fresh vegetables: Representative truck rates for selected fresh vegetables, Jan.-June 1980-81 ¹

Commodity, area, and city	1980						1981					
	Jan.	Feb.	Mar.	Apr.	May	June	Jan.	Feb.	Mar.	Apr.	May	June
Dollars per package												
Cabbage (50 lb. wirebound crate)												
Southern Florida to:												
Atlanta	.87	.87	.76	.83	.89	--	.88	.88	.88	1.00	.92	--
Chicago	2.22	2.11	2.18	2.18	2.44	--	2.25	2.08	2.13	2.30	2.30	--
New York City	2.09	2.04	2.09	2.08	2.35	2.43	2.05	2.00	2.08	2.30	2.30	--
Rio Grande Valley, Tex. to:												
Chicago	2.13	2.13	2.13	2.00	2.00	--	2.27	2.12	2.12	2.19	2.15	2.15
New York City	3.07	3.08	3.08	3.08	3.08	3.08	3.23	3.23	3.23	3.23	3.23	3.23
Carrots (48/1 lb. film)												
Imperial Valley, Calif. to:												
Atlanta	2.23	2.46	2.38	2.38	2.38	--	2.31	2.44	2.78	2.85	2.85	--
Chicago	2.69	2.62	2.46	2.46	2.46	--	2.62	2.62	2.77	3.00	2.92	--
New York City	3.46	3.46	3.54	3.54	3.54	--	3.54	3.54	3.85	4.08	3.84	--
Los Angeles	.71	.71	.71	.71	.71	--	.76	.76	.76	.76	.76	--
Rio Grande Valley, Tex. to:												
Chicago	1.63	1.70	1.78	1.69	1.75	1.94	1.84	1.72	1.72	1.78	1.75	1.75
Dallas	.90	.90	.90	.90	.90	.90	.80	.80	.80	.80	.80	.80
New York City	2.38	2.41	2.56	2.50	2.63	3.00	2.62	2.69	2.62	2.62	2.62	2.62
Celery (60 lb. wirebound crate)												
Southern California to:												
Atlanta	2.67	2.67	2.58	2.88	3.58	4.17	3.00	2.92	2.92	3.17	3.33	4.58
Chicago	3.16	2.75	2.92	2.92	3.50	4.05	3.00	2.75	2.75	3.08	3.08	4.58
New York City	4.08	3.92	3.83	4.08	4.92	5.50	4.00	3.80	4.00	4.42	4.25	6.66
Southern Florida to:												
Atlanta	1.06	1.06	1.06	1.03	1.09	1.15	1.00	.95	.95	1.05	1.05	1.05
Chicago	2.21	2.11	2.18	2.18	2.44	2.58	2.13	2.08	2.03	2.32	2.30	2.30
New York City	2.09	2.03	2.09	2.08	2.35	2.43	2.10	1.98	2.00	2.02	2.30	2.30
Corn (4-3/4 doz. wirebound crate)												
Southern Florida to:												
Chicago	1.71	1.80	1.80	1.91	2.08	2.05	2.00	2.00	1.98	2.05	2.00	2.00
New York City	1.67	1.66	1.74	1.80	2.05	2.00	1.95	1.93	1.88	1.98	1.98	1.98
Lettuce (24 head ctn)												
Imperial Valley, Calif. to:												
Atlanta	1.81	2.00	1.94	1.94	--	--	1.88	2.00	2.25	2.31	--	--
Chicago	2.18	2.12	2.00	2.00	--	--	2.12	2.12	2.25	2.44	--	--
Dallas	1.31	1.25	1.31	1.38	--	--	1.25	1.50	1.62	1.62	--	--
Los Angeles	.58	.58	.58	.58	--	--	.62	.62	.62	.62	--	--
New York City	2.81	2.81	2.88	2.88	--	--	2.87	2.87	3.12	3.31	--	--
Potatoes (100-lb. sack)												
Idaho Falls, Idaho to:												
Atlanta	4.29	4.29	4.17	4.23	4.21	4.29	4.52	4.52	4.52	4.52	4.40	4.52
Chicago	3.33	3.33	3.21	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33
Los Angeles	1.75	1.75	1.86	1.86	1.92	--	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
New York City	5.24	5.24	5.16	5.24	5.24	5.24	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Presque Isle, Maine to:												
Boston	1.30	1.30	1.30	1.30	1.30	1.30	1.40	1.40	1.40	1.40	1.40	1.40
New York City	1.95	1.95	1.95	2.12	2.14	2.14	2.22	2.33	2.38	2.38	2.38	2.38
Western and Central New York to:												
Atlanta	2.00	1.99	1.90	1.85	1.90	--	2.38	2.38	2.38	2.38	2.38	--
New York	1.40	1.35	1.30	1.30	1.30	--	2.00	2.00	2.00	2.00	2.00	--
Tomatoes, Vine Ripe (30 lb. ctn.)												
Southern Florida to:												
Atlanta	.59	.47	.48	.61	.63	.52	.52	.52	.52	.52	.52	--
Chicago	1.30	1.23	1.30	1.36	1.44	1.35	1.25	1.25	1.32	1.38	1.63	--
New York City	1.32	1.18	1.24	1.27	1.42	1.35	1.25	1.20	1.30	1.40	1.62	--

¹AMS - Fruit and Vegetable Truck Rate Report first week of month.

NA = Not Available.

Table 16--Canned vegetables: Commercial pack and canners^o seasonal supply, shipments to latest month; and total seasonal shipments, selected commodities

Commodity and season	Carryover	Pack	Seasonal supply	Shipments to latest month	Total seasonal shipments
Million cases 24/303 ^o s					
Asparagus					
1975-76	2.4	3.6	6.0	¹ 3.1	4.9
1976-77	1.1	3.6	4.7	¹ 2.4	4.4
1977-78	.3	3.7	4.0	¹ 1.4	3.4
1978-79	.6	3.4	4.0	¹ 1.4	3.1
1979-80	.9	2.8	3.7	¹ 1.2	6.4
1980-81	1.0	2.5	3.5	¹ 1.3	2.7
Beans, lima					
1975-76	.2	3.7	3.9	³ 2.6	2.9
1976-77	1.0	2.8	3.8	³ 2.7	3.2
1977-78	.6	2.7	3.3	³ 2.8	3.0
1978-79	.3	3.4	3.7	³ 2.8	3.2
1979-80	.5	3.1	3.6	³ 2.7	3.0
1980-81	.6	2.8	3.4	N.A.	N.A.
Beans, snap					
1975-76	15.3	55.4	70.7	³ 54.5	57.1
1976-77	13.6	47.4	61.0	³ 53.2	55.3
1977-78	5.7	54.5	60.2	³ 52.7	55.2
1978-79	5.0	57.1	62.1	³ 54.6	55.9
1979-80	6.2	66.3	72.5	³ 59.4	61.2
1980-81	11.3	58.2	69.5	N.A.	N.A.
Beets					
1975-76	4.0	13.4	17.4	⁴ 9.4	12.4
1976-77	5.1	9.2	14.3	⁴ 9.4	11.6
1977-78	2.6	11.3	13.9	⁴ 9.6	11.8
1978-79	2.2	12.8	15.0	⁴ 10.1	12.1
1979-80	2.9	15.0	17.9	⁴ 9.1	11.2
1980-81	6.7	11.3	18.0	⁴ 9.8	N.A.
Carrots					
1975-76	3.9	5.0	8.9	⁴ 5.3	6.3
1976-77	2.6	5.3	7.9	⁴ 5.4	6.2
1977-78	1.8	6.0	7.8	⁴ 5.1	5.6
1978-79	2.1	6.6	8.7	⁴ 6.0	6.6
1979-80	2.1	6.9	9.0	⁴ 4.7	5.3
1980-81	3.8	5.1	8.9	⁴ 5.8	N.A.
Corn, sweet					
1975-76	5.1	57.5	62.6	³ 49.2	52.9
1976-77	9.7	54.7	64.4	³ 51.7	54.7
1977-78	9.7	56.3	66.0	³ 55.2	58.4
1978-79	7.6	57.9	65.5	³ 52.9	55.7
1979-80	9.8	60.0	69.8	³ 56.8	60.2
1980-81	9.6	50.6	60.2	N.A.	N.A.
Peas, green					
1975-76	4.5	35.2	39.7	³ 31.3	31.3
1976-77	8.4	31.9	40.3	³ 32.6	32.6
1977-78	7.7	30.2	37.9	³ 33.6	33.5
1978-79	4.4	25.3	29.7	³ 28.1	28.1
1979-80	1.6	36.5	38.1	³ 31.8	31.8
1980-81	6.2	30.1	36.3	³ 30.1	30.1

¹August 1. ²May 1. ³June 1. ⁴April 1. N.A. = Not Available.

National Food Processors Association.

Table 17--Vegetables, frozen: United States commercial packs 1979 and 1980, and cold storage holdings, July 1 with comparisons

Commodity	Packs		Cold storage holdings		
	1979	1980	July 1, 1979	July 1, 1980	July 1, 1981 ¹
Million pounds					
Asparagus	24	11	19	16	11
Beans, lima:					
Fordhook	41	31	10	20	14
Baby	83	53	40	44	16
Total	124	84	50	64	30
Beans, snap:					
Regular cut	162	156	48	58	53
French cut	92	72	25	33	24
Wax	10	8	(²)	(²)	(²)
Total	264	236	73	91	77
Broccoli	299	291	100	107	90
Brussels sprouts	61	63	22	25	27
Carrots	263	191	82	100	63
Cauliflower	101	84	44	41	28
Corn, cut	311	271	85	66	42
Corn-on-cob	269	259	102	85	38
Mixed vegetables	(²)	(²)	42	48	36
Mushrooms	14	15	(²)	(²)	(²)
Onions	167	156	23	26	19
Peas	427	316	173	178	132
Peas and carrots	(²)	(²)	10	11	9
Pumpkin and squash	24	23	24	34	30
Rhubarb	8	8	(²)	(²)	(²)
Southern greens ³	69	60	24	31	33
Spinach	181	169	108	96	112
Okra	33	42	35	29	20
Peas, blackeye	21	21	9	6	3
Miscellaneous vegetables	123	130	138	133	122
Total ⁴	2,783	2,430	1,163	1,187	922
French fried potatoes	3,488	3,182	837	824	669
Other frozen potatoes	602	671	135	140	125
Total frozen potatoes	4,090	3,853	972	964	794
Grand total ⁴	6,873	6,283	2,125	2,151	1,716

¹Preliminary. ²Included in miscellaneous vegetables. ³Includes collards, kale, mustards, turnips green/turnips. ⁴May not add due to rounding.

Pack data from American Frozen Food Institute. Stocks from Cold Storage Report, ERS, USDA, issued monthly.

Table 18--Potatoes: Prices f.o.b. shipping points and wholesale price at
New York and Chicago, U.S. No. 1 indicated periods 1980 and 1981

Item	State	Weekend ended					
		1980			1981		
		May 17	June 6	July 12	May 9	June 6	July 10
Dollars per 100 lb. sack							
F.o.b. shipping points							
Kern County Long Whites	California	7.45	6.15	8.80	11.38	10.80	11.00
Klamath Basin Russets	Wash.	8.20	--	--	16.00	--	--
Southern points Rounds Reds	Ariz.	7.00	6.25	5.50	11.50	--	--
Round Whites	N. Fla.	7.62	6.68	7.80	--	12.70	--
Tuesday nearest mid-month							
		1980			1981		
		May 13	June 10	July 16	May 12	June 23	July 7
Dollars per 100 lb. sack							
Terminal markets							
New York							
Long Whites	California	--	11.50	6.50	--	15.00	10.00
Katahdin, 2" min.	Maine	7.50	7.30	3.75	6.75	12.50	6.35
Chicago							
Long Whites	California	--	8.00	9.75	--	17.25	--

F.o.b. prices are the simple averages of the mid-point of the range of daily prices. Market prices are for Tuesday of each week, and are submitted by Market News representatives to the Fruit and Vegetable Division of AMS.

Table 19--Sweetpotatoes: Representative wholesale price (wholesale lots) at New York and Chicago for stocks of generally good merchantable quality and condition U.S. No. 1, when available) indicated periods, 1980 and 1981

		Tuesday nearest mid-month						
		1980			1981			
Item	State	May 13	June 10	July 15	May 12	June 16	July 17	
Dollars per 50 lb. container								
Terminal markets								
New York								
Porto Rico, cured	North Carolina	7.75	8.00	11.50	18.50	22.00	24.50	
Chicago								
Porto Rico, cured	Louisiana	10.00	--	--	18.25	22.50	--	

Prices submitted for Tuesday of each week by the Market News representative at New York and Chicago.

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Retail, Wholesale, and Shipping Point Price Linkages for Fresh Vegetables

by

Ronald W. Ward and Glenn Zepp*

ABSTRACT: The wholesale market for fresh vegetables is the focal point for pricing. Wholesale prices tend to lead both retail and shipping point prices. Retail prices reflect falling wholesale prices more than they mirror rising wholesale prices. In contrast, wholesale price decreases, instead of increases are more fully passed through to the shipping point. Moreover, most price adjustments at the wholesale level are passed through the system during the same month.

Keywords: Price spreads, fresh vegetables, asymmetric price response.

In 1980, the retail food prices rose by 8 percent, while the farm value for equivalent foods increased 5.3 percent, leading to an 8.4 percent jump in the farm to retail price spread. What explains the widening spread between retail and farm prices? Where are prices set, and how are they passed on to other levels in the marketing system? Are they determined at the shipping point, and the changes passed upward through the marketing channels, or are prices determined at the retail or wholesale level, with adjustments then occurring downward through the system? How well do price changes at one level reflect changes at another?

Do increases and decreases get passed along equally, or are retailers more likely to pass price rises on to consumers? This article reports highlights from a study of retail, wholesale, and shipping point price relationships for fresh vegetables. In the study some of the above questions

are investigated.¹ The analysis is based on monthly prices reported from 1967 to 1979.²

Fresh Vegetable Price Spreads

Price spreads measure the difference between prices of a commodity at the retail, wholesale, and shipping point for a specific time period. Table 1 presents the prices for 11 different fresh vegetables sold in a number of major cities. The shipping point share of the retail price is readily calculated from these prices, as shown in table 2. Most of the retail to shipping point price spread occurs between the retail and wholesale markets. Retail prices run 100 percent greater than wholesale prices, whereas wholesale prices average 45 percent over shipping point prices.

¹Ward, Ronald W. Asymmetry in the Retail, Wholesale and Shipping Point Pricing for Fresh Vegetables. Article in Review, June 1981.

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²ERS. Prices and Spreads for Selected Fresh Vegetables Sold in Major Markets. USDA-ERS, AGERS-27. Wash. D.C., May 1977. Unpublished USDA data.

The farm to retail price spread increased at an annual average rate of 7.7 percent, with the major share of this increase occurring between the wholesale to retail levels (1). The farm share of the retail price for all fresh fruits and vegetables was approximately 28 percent, as compared with 37 percent for all farm foods included in the USDA market basket (1). Shipping point prices shown relative to the retail prices (table 2) indicate considerable variation across the fresh produce.

Shipping point shares ranged from a low of 20 percent for spinach to a high of 64 percent for asparagus. Part of this difference must be attributed to variations in marketing services required for the various produce.

The shipping point shares of the retail price among the various cities were similar for each fresh vegetable. The shares for Chicago and New York are shown in table 2 and in general only slight regional differences are seen for each product.

A recent ESS report provides an overview of the cost components leading to the widening price spread. In general, costs for assembly and procurement remain stable during 1976-80. But, the cost of inter-city transportation, wholesaling, and retailing increased. For most of the fresh produce the cost of retailing accounted for the major portion of the total marketing bill. Larger retail margins for fresh produce partly reflect the comparatively high costs of retail labor and low sales per square foot of selling space (1).

Price Linkage

Linkage refers to the directional relationships among retail, wholesale, and shipping point prices, for which a change in one price is associated with a change in another. The analysis indicates that "market signals" or "information" leads to price changes that show up first in wholesale markets. Both consumption and production information is readily available at this distribution level, and the evidence points to this market as a focal point for pricing. Wholesale markets generally are more concentrated than shipping

points, and information is more readily accessible.

Wholesale price changes precede and lead to adjustments at the retail level for most produce. Carrots and celery both show a strong linkage from the wholesale markets to the retail markets (2). The perishable nature of vegetables fresh and the limited amount of packaging services required between wholesale and retail contributed to the direction of this linkage. The same relationship did not show up across markets for lettuce. In some lettuce markets, the wholesale and retail prices appeared unrelated, while in other cases prices changed at nearly the same time. Retailers' pricing policy for lettuce--a high-volume perishable item often used as a loss leader--may have been a contributing factor to the weaker relationship.

The empirical analysis for the commodities in table 1 also suggest a strong linkage where the wholesale market leads the shipping point prices.³ Again, the results point to the major importance of the wholesale market as the place where prices are first determined.

The linkage found in this study differs from the typical textbook example, where price changes move from shipping point to wholesale markets and then to retail outlets. Rather, in this analysis, the direction of change moves from wholesale to retail and to shipping points (2).

Symmetry of Price Responses⁴

Symmetry of price responses refers to whether price increases and decreases pass from level to level to the same extent. Results from this study indicate that retail prices tend to reflect fal-

³Price data for carrot, celery, and lettuce are reported on a 12-month basis, and this allowed for testing the price linkage using a Granger causality test. The same linkage from wholesale to both retail and the shipping point is used for the remaining vegetables.

ling wholesale prices more fully than they reflect rising wholesale prices. In contrast, wholesale price decreases are more fully mirrored at the shipping point than are increases³. Clearly growers do not fully benefit from rising wholesale prices but realize the full impact from falling prices within the same time period.

Consumers often complain that price increases are passed through to the retail level but that decreases are not. The results in table 3 show the opposite to be true. The ratio of the parameters showing the wholesale-retail linkage for rising versus falling markets is derived so that if the ratio equals one there is no statistical difference in the responses. If the ratio is less than one, the markets tend to pass through a larger portion of price declines than they do for price increases. If it exceeds one, rising prices tend to be passed through to a greater extent than falling prices. The majority of values are less than one, implying that declines in the wholesale markets are passed through to a greater extent than are increases. In no case was the ratio greater than one. For example, a drop in the Chicago wholesale celery price is fully and immediately reflected at the retail level, whereas, only 60 percent of a wholesale increase initially shows up in higher retail prices.

Retail resistance to price rises can be partially explained by the perishable nature of the product. Fresh vegetables require high turnover, and rising prices would slow this down, possibly increasing spoilage loss. Upward price competition and stickiness may also occur because of the rival response among large food chains. One store may resist raising prices in fear of losing market shares to another outlet that does not raise its prices.

⁴Wolffram's asymmetric models have been used to estimate the symmetry conditions for each relationship. Details can be found in reference by Ward, page 4.

The relationship between the wholesale and shipping point prices should be of more immediate concern to producers. The asymmetric relationships shown in table 3 were not as consistent as seen with the retail level, but the evidence is significant for a large number of the commodities. Again, a large number of the ratios are less than one, showing that a larger portion of wholesale price decreases are passed through to the shipping point relative to wholesale price increases.

Using the Russet potato market for illustration, in Los Angeles the shipping point price immediately reflects 83 percent of a wholesale decline but only 52 percent of an increase. For tomatoes in New York, 87 percent of a decrease versus 43 percent of an increase is seen in the current shipping point price. The pattern is generally consistent across a wide range of produce. There are a few for which ratios equal one (i.e., retail or shipping points respond equally to rising and falling wholesale prices). While there are numerical differences among produce prices, what one learns from the analysis is that marketing and distributional costs alone are not adequate for explaining price differences among distributional points in the system. Monthly price spreads change partly because of the direction of the price adjustments at the wholesale level.

Delayed Adjustments

For the commodities included in table 1, the analysis shows that most of the responses to wholesale price changes are immediately passed through to both the retail and shipping points. But, price changes at one point in the distributional system may require some delay before they are reflected at the next level. Hence, there may be a time lag in retail and shipping point responses to wholesale price changes.

While most of the price response occurs in the same month, there tends to be a small amount of carryover into subsequent months. The carryover generally does not extend beyond 1 month, and for most of the produce this lag response is small relative to the initial adjust-

ment. For example, fresh tomatoes in Chicago showed a mean lag of .007, thus indicating almost no lag effect. Whereas, the mean lag for green peppers is in the higher range but still within the 1 to 2 months.

The lack of a longer lag response is consistent with highly perishable products that are continuously moving through market channels. The short lag response probably arises out of delays in the distributional system, as well as to the situation where produce is purchased on a contract basis and the price is established ahead of time. A similar study of processed vegetables is underway, and because processed vegetables

are less perishable, one would expect to find a longer delay than for fresh vegetables.

REFERENCES

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2. Ward, Ronald W. "Asymmetry in the Retail, Wholesale, and Shipping Point Pricing for Fresh Vegetables." Article in review. June 1981.

Table 1.--Fresh vegetable annual prices averaged from 1967 to 1979 for selected cities

Commodity	City	Season		Mean Prices		
		First month	Last month	Retail	Wholesale	Shipping
Carrots						
(\$/48 1-lb. bags)	Chicago	Jan.	Dec.	10.361	6.194	4.306
Carrots						
(\$/48 1-lb. bags)	New York	Jan.	Dec.	11.896	6.935	4.488
Celery						
(\$/60 1-lbs. crate)	Chicago	Jan.	Dec.	13.515	7.305	4.150
Celery						
(\$/60 1-lbs. crate)	Los Angeles	Jan.	Dec.	11.328	5.101	4.256
Celery						
(\$/60-lbs. crate)	New York	Jan.	Dec.	14.535	7.991	4.244
Celery						
(\$/60-lbs. crate)	Seattle	Jan.	Dec.	11.254	5.441	3.451
Celery						
(\$/60-lbs. crate)	Atlanta	Jan.	Dec.	12.268	4.491	3.418
Lettuce						
(\$/24 head-carton)	Baltimore	Jan.	Dec.	8.202	4.798	2.639
Lettuce						
(\$/24-head carton)	Chicago	Jan.	Dec.	9.189	5.569	3.028
Lettuce						
(\$/24-head carton)	Los Angeles	Jan.	Dec.	7.862	4.490	3.104
Lettuce						
(\$/24-head carton)	New York	Jan.	Dec.	10.475	6.337	3.133
Asparagus						
(\$/30-lbs. crate)	New York	Apr.	June	17.446	12.835	10.311
Asparagus						
(\$/30-lbs. crate)	Seattle	Apr.	June	12.480	9.499	8.761
Cabbage						
(\$/50-lbs. crate)	Chicago	Dec.	May	8.816	4.357	2.829
Cabbage						
(\$/50-lbs. crate)	New York	Dec.	May	9.523	4.746	3.244
Corn						
(\$/crate)	Boston	Jan.	June	7.929	5.536	3.881
Corn						
(\$/crate)	Chicago	Jan.	June	7.529	5.689	3.781
Corn						
(\$/crate)	Los Angeles	Jan.	June	8.714	5.928	3.811
Pascal Celery						
(\$/60-lbs. crate)	Chicago	Dec.	June	14.104	6.293	4.067
Pascal Celery						
(\$/60-lbs. crate)	New York	Dec.	June	14.810	6.441	4.239
Pascal Celery						
(\$/60-lbs. crate)	Washington	Dec.	June	12.742	5.248	3.409
Cucumbers						
(\$/1-1/9 bu. crate)	Chicago	Nov.	May	16.656	9.609	7.646
Cucumbers						
(\$/1-1/9 bu. crate)	New York	Nov.	May	16.004	10.148	7.668
Green Peppers						
(\$/30-lbs.)	Chicago	Jan.	June	17.046	10.414	7.941
Green Peppers						
(\$/30-lbs.)	New York	Jan.	June	16.147	9.909	8.015

Continued--

Table 1.--Fresh vegetable annual prices averaged from 1967 to 1979 for selected cities--Continued

Commodity	City	Season		Mean Prices		
		First month	Last month	Retail	Wholesale	Shipping
Storage Onions						
(\$/50-lbs. sack)	Boston	Sept.	Dec.	8.806	2 746	2.432
Storage Onions						
(\$/50-lbs. sack)	Chicago	Sept.	Dec.	7.832	2.888	2.349
Storage Onions						
(\$/50-lbs. sack)	New York	Sept.	Dec.	7.205	2.905	2.476
Onions						
(\$/50-lbs. sack)	Chicago	May	Aug.	11.099	4.758	3.148
Onions						
(\$/50-lbs. sack)	Boston	May	Aug.	11.807	5.091	3.153
Onions						
(\$/50-lbs. sack)	New York	May	Aug.	11.473	5.476	3.401
Potatoes, Long White						
(\$/100 lbs.)	Los Angeles	May	Aug.	14.009	6.869	5.307
Potatoes, Russet						
(\$/100 lbs.)	Atlanta	Sept.	Apr.	18.829	7.635	4.856
Potatoes, Russet						
(\$/100 lbs.)	Chicago	Sept.	Apr.	15.506	7.657	4.887
Potatoes, Russet						
(\$/100 lbs.)	Los Angeles	Sept.	Apr.	10.588	6.522	4.545
Potatoes, Russet						
(\$/100 lbs.)	New York	Sept.	Apr.	16.754	9.011	4.884
Potatoes, Round White						
(\$/100 lbs.)	Atlanta	Sept.	Apr.	11.744	5.147	3.652
Potatoes, Round White						
(\$/100 lbs.)	Boston	Sept.	Apr.	11.672	4.627	3.495
Potatoes, Round Red						
(\$/100 lbs.)	Chicago	Sept.	Apr.	12.489	4.946	4.552
Potatoes, Round Red						
(\$/100 lbs.)	Detroit	Sept.	Apr.	13.506	6.447	4.419
Potatoes, Round White						
(\$/100 lbs.)	New York	Sept.	Apr.	11.714	4.988	3.955
Spinach						
(\$/21-lbs. bu.)	Chicago	Dec.	Mar.	15.296	4.442	2.962
Spinach						
(\$/21-lbs. bu.)	New York	Dec.	Mar.	15.451	5.116	3.271
Sweet Potatoes						
(\$/50-lbs. crate)	Chicago	Aug.	Apr.	10.902	7.115	5.796
Sweet Potatoes						
(\$/50-lbs. crate)	New York	Aug.	Apr.	11.564	7.210	5.681
Tomatoes						
(\$/20-lbs. carton)	Chicago	Jan.	May	10.052	7.138	5.895
Tomatoes						
(\$/20-lbs. carton)	New York	Jan.	May	12.371	8.122	6.084

Table 2.--Shipping point share of retail price averaged from 1967 to 1979

Shipping Point Price As A Percentage Of Retail Price			
	All Regions	Chicago	New York
	Percent		
Carrots	39.6	41.6	37.7
Celery	31.2	30.7	29.2
Lettuce	33.6	32.9	29.9
Asparagus	64.6	59.1	<u>1/</u>
Cabbage	33.1	32.1	34.1
Corn	47.6	50.2	<u>1/</u>
Pascal Celery	28.1	28.8	28.6
Cucumbers	46.9	45.9	47.9
Green Peppers	48.1	46.6	49.6
Storage Onions	30.7	29.9	34.4
Onions	28.2	28.4	29.6
Potatoes	33.1	31.5	29.1
Spinach	20.3	19.4	21.2
Sweet Potatoes	51.1	53.2	49.1
Tomatoes	53.7	58.6	48.8

1/ Data not available for this market.

Table 3.--Ratio of price parameters for increasing and decreasing wholesale prices analyzed for selected commodities and cities over the time period 1967 through 1979 1/

Commodity	City	Retail-Wholesale	Shipping Point-- Wholesale
		Increasing/Decreasing	Increasing/Decreasing
		----- Ratio -----	
Carrots			
(\$/48 1-lb. bags)	Chicago	1.00	1.00
Carrots			
(\$/48 1-lb. bags)	New York	1.00	1.00
Celery			
(\$/60-lbs. crate)	Chicago	.60	.66
Celery			
(\$/60-lbs. crate)	Los Angeles	1.00	.89
Celery			
(\$/60-lbs. crate)	New York	1.00	.80
Celery			
(\$/60-lbs. crate)	Seattle	.52	1.00
Celery			
(\$/60-lbs. crate)	Atlanta	1.00	1.00
Lettuce			
(\$/24-head carton)	Baltimore	1.00	1.00
Lettuce			
(\$/24-head carton)	Chicago	1.00	1.00
Lettuce			
(\$/24-head carton)	Los Angeles	1.00	1.00
Lettuce			
(\$/24-head carton)	New York	1.00	1.00
Asparagus			
(\$/30-lbs. crate)	New York	<u>2</u> /	.08
Asparagus			
(\$/30-lbs. crate)	Seattle	.36	.33
Cabbage			
(\$/50-lbs. crate)	Chicago	.44	.58
Cabbage			
(\$/50-lbs. crate)	New York	1.00	.67
Corn			
(\$/crate)	Boston	.29	.64
Corn			
(\$/crate)	Chicago	.46	.62
Corn			
(\$/crate)	Los Angeles	.23	.55
Pascal Celery			
(\$/60-lbs. crate)	Chicago	.54	.52
Pascal Celery			
(\$/60-lbs. crate)	New York	.47	.64
Pascal Celery			
(\$/60-lbs. crate)	Washington	.65	.51
Cucumbers			
(\$/1-1/9 bu. crate)	Chicago	1.00	1.00
Cucumbers			
(\$/1-1/9 bu. crate)	New York	1.00	1.00
Green Peppers			
(\$/30 lbs.)	Chicago	.65	.86
Green Peppers			
(\$/30 lbs.)	New York	.58	1.00

Continued--

Table 3.--Ratio of price parameters for increasing and decreasing wholesale prices analyzed for selected commodities and cities over the time period 1967 through 1979 1--Continued

Commodity	City	Retail-Wholesale	Shipping point--
		Increasing/Decreasing	Wholesale Increasing/Decreasing
			Ratio
Storage Onions (\$/50-lbs. sack)	Boston	.62	.31
Storage Onions (\$/50-lbs. sack)	Chicago	.48	.42
Storage Onions (\$/50-lbs. sack)	New York	.11	.33
Onions (\$/50-lbs. sack)	Chicago	.27	.28
Onions (\$/50-lbs. sack)	Boston	.22	.41
Onions (\$/50-lbs. sack)	New York	<u>2</u> /	.24
Potatoes, Long White (\$/100 lbs.)	Los Angeles	.47	.34
Potatoes, Russet (\$/100 lbs.)	Atlanta	.69	1.00
Potatoes, Russet (\$/100 lbs.)	Chicago	.15	.71
Potatoes, Russet (\$/100 lbs.)	Los Angeles	.66	.63
Potatoes, Russet (\$/100 lbs.)	New York	.43	.53
Potatoes, Round White (\$/100 lbs.)	Atlanta	.21	.54
Potatoes, Round White (\$/100 lbs.)	Boston	.42	.55
Potatoes, Round White (\$/100 lbs.)	Chicago	1.00	.49
Potatoes, Round White (\$/100 lbs.)	Detroit	1.00	.64
Potatoes, Round White (\$/100 lbs.)	New York	.57	.50
Spinach (\$/21-lbs. bu.)	Chicago	.44	.26
Spinach (\$/21-lbs. bu.)	New York	<u>2</u> /	<u>2</u> /
Sweet Potatoes (\$/50-lbs. crate)	Chicago	.26	.40
Sweet Potatoes (\$/50-lbs. crate)	New York	.10	.66
Tomatoes (\$/20-lbs. carton)	Chicago	.57	.58
Tomatoes (\$/20-lbs. carton)	New York	.36	.50

1/ Parameters showing the relationship between the retail and wholesale markets and the shipping point and wholesale are estimated for both rising and falling wholesale prices. The ratios shown in the table are calculated by dividing the price parameter for increasing markets by the parameter for declining wholesale prices.

2/ The relationship for rising prices was near zero or negative.

Source: AMS, USDA.

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